

FIG. 1A

100

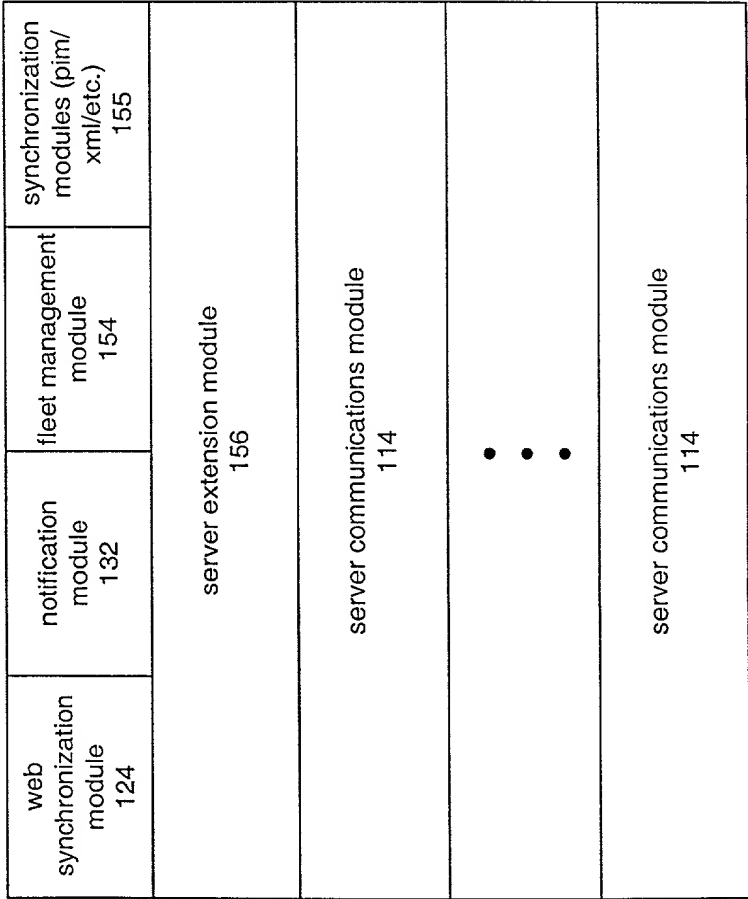
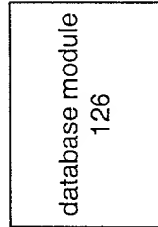
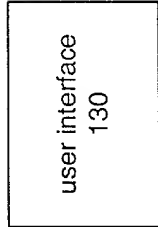
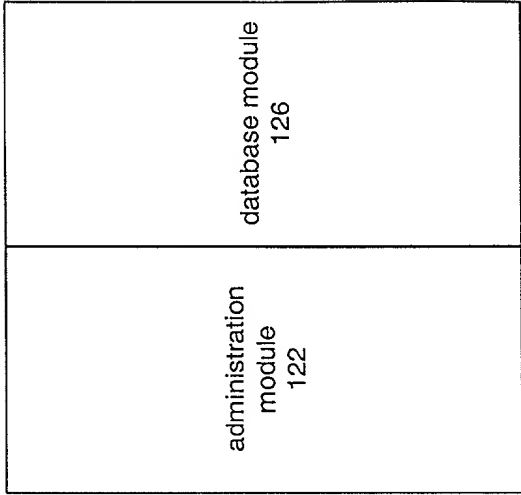


FIG. 1B

# Data Processing Unit 103A

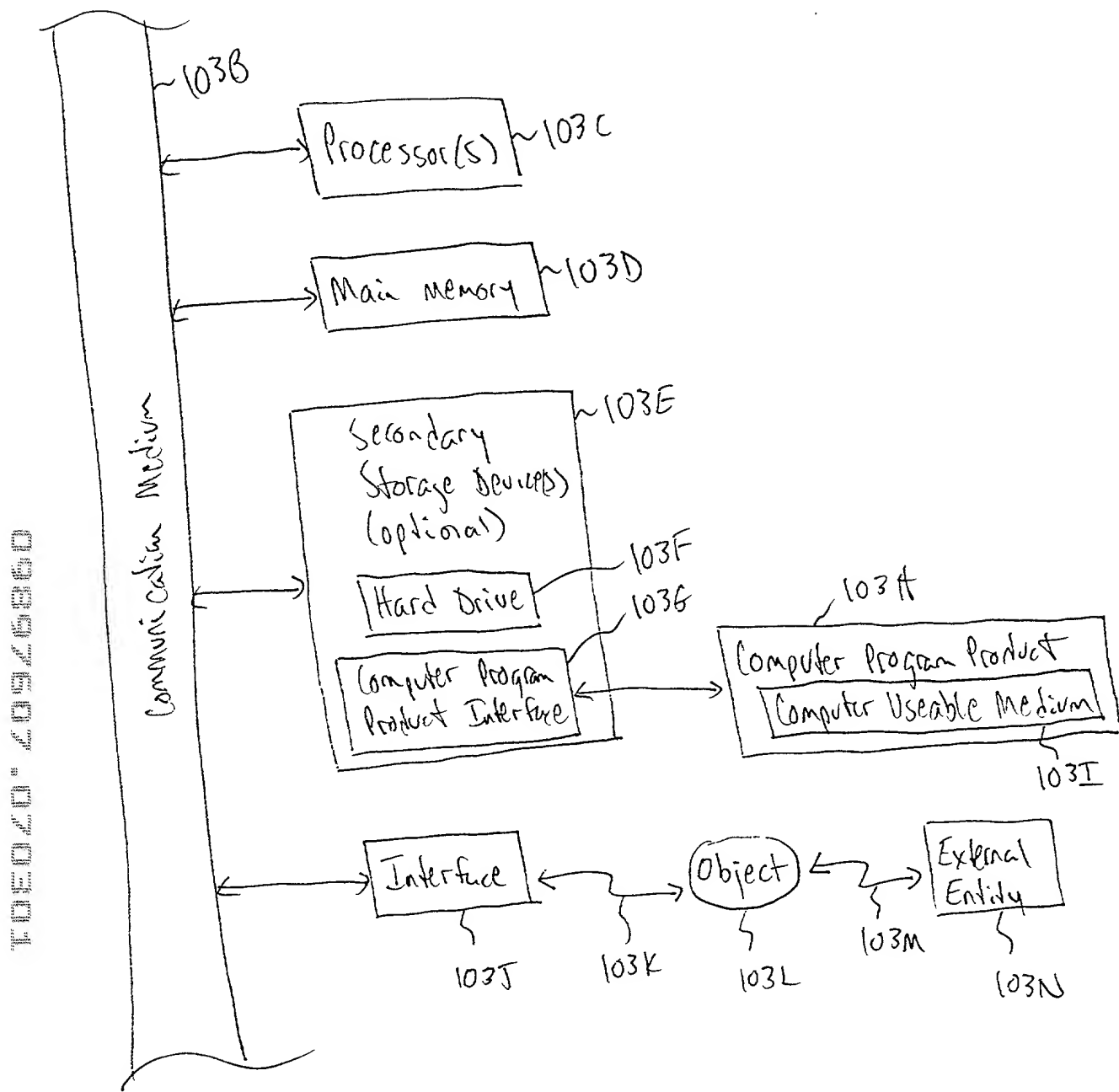
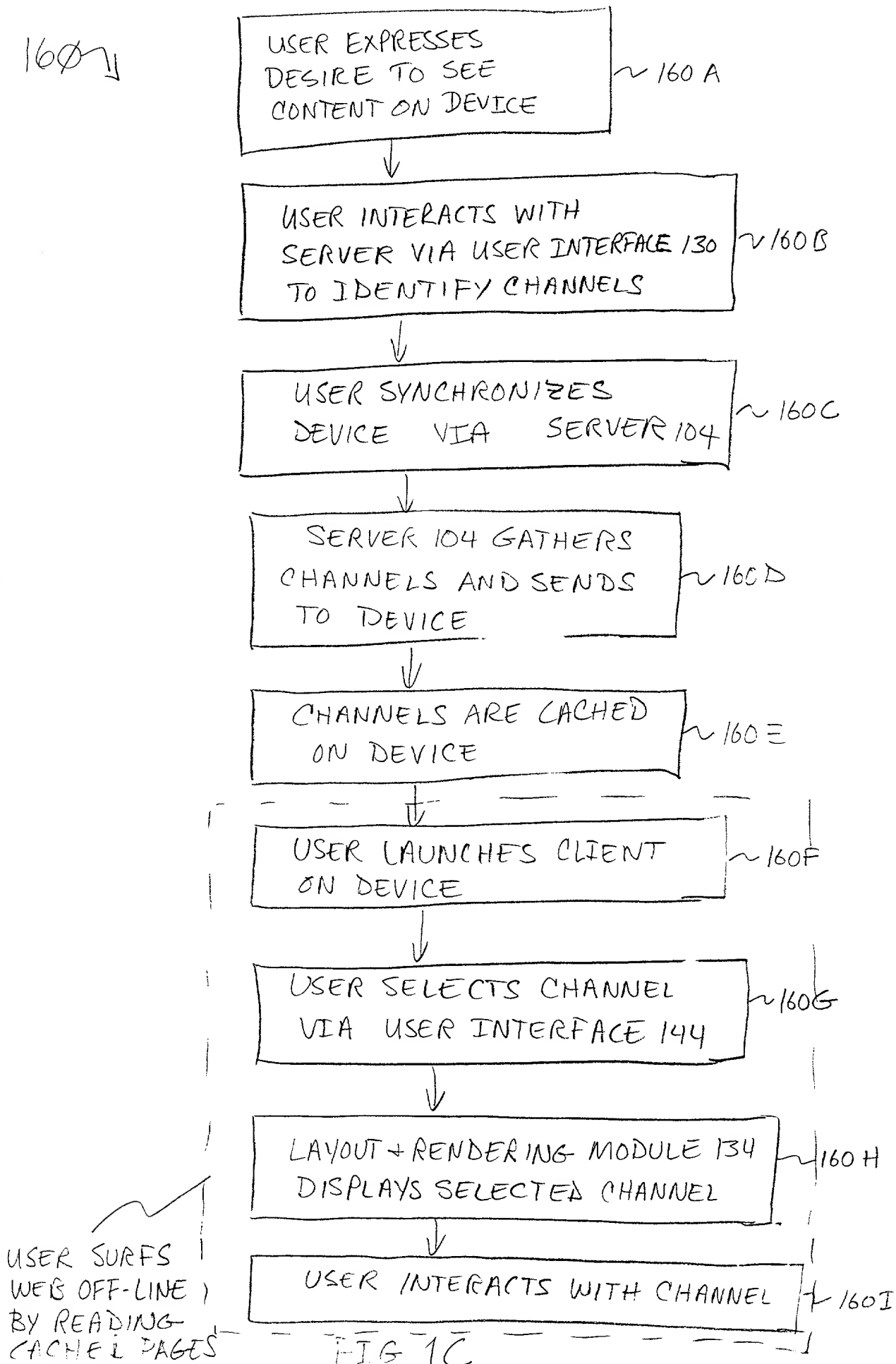


FIG. 1B1

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160 I  
↓

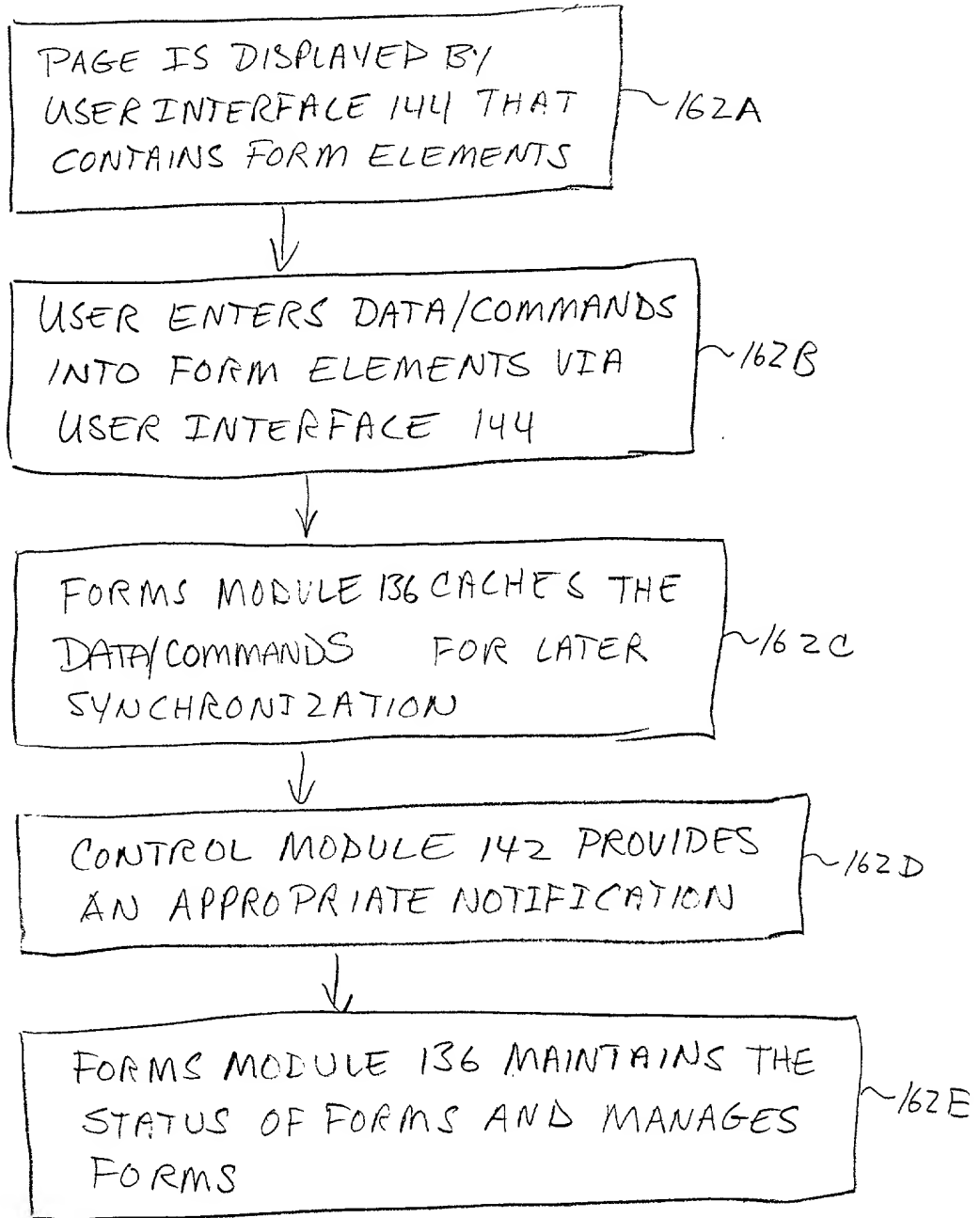


FIG. 1D

160 I'



USER ACCESSES A CHANNEL  
CONTAINING A MULTIPLE  
PAGE FORM

~164 A



USER INTERFACE 144 DISPLAYS  
THE FIRST PAGE OF THE FORM

~164 B



USER ENTERS DATA/COMMANDS  
INTO PAGE OF FORM DISPLAYED

~164 C



CLIENT EXTENSION INTERFACE 138  
STORES DATA FROM DISPLAYED  
PAGE OF FORM.

~164 D



USER INTERFACE 144 DISPLAYS THE  
NEXT PAGE OF FORM

~164 E



CLIENT EXTENSION INTERFACE 138  
DELIVERS COMPLETED MULTIPLE PAGE  
FORM TO THE FORMS MODULE 136

~164 F



CONTROL MODULE 142 PROVIDES AN APPROPRIATE  
NOTIFICATION

~164 G



FORMS MODULE 136 MAINTAINS/MANAGES  
FORMS

~164 H

FIG. 1E

FIG. 1E

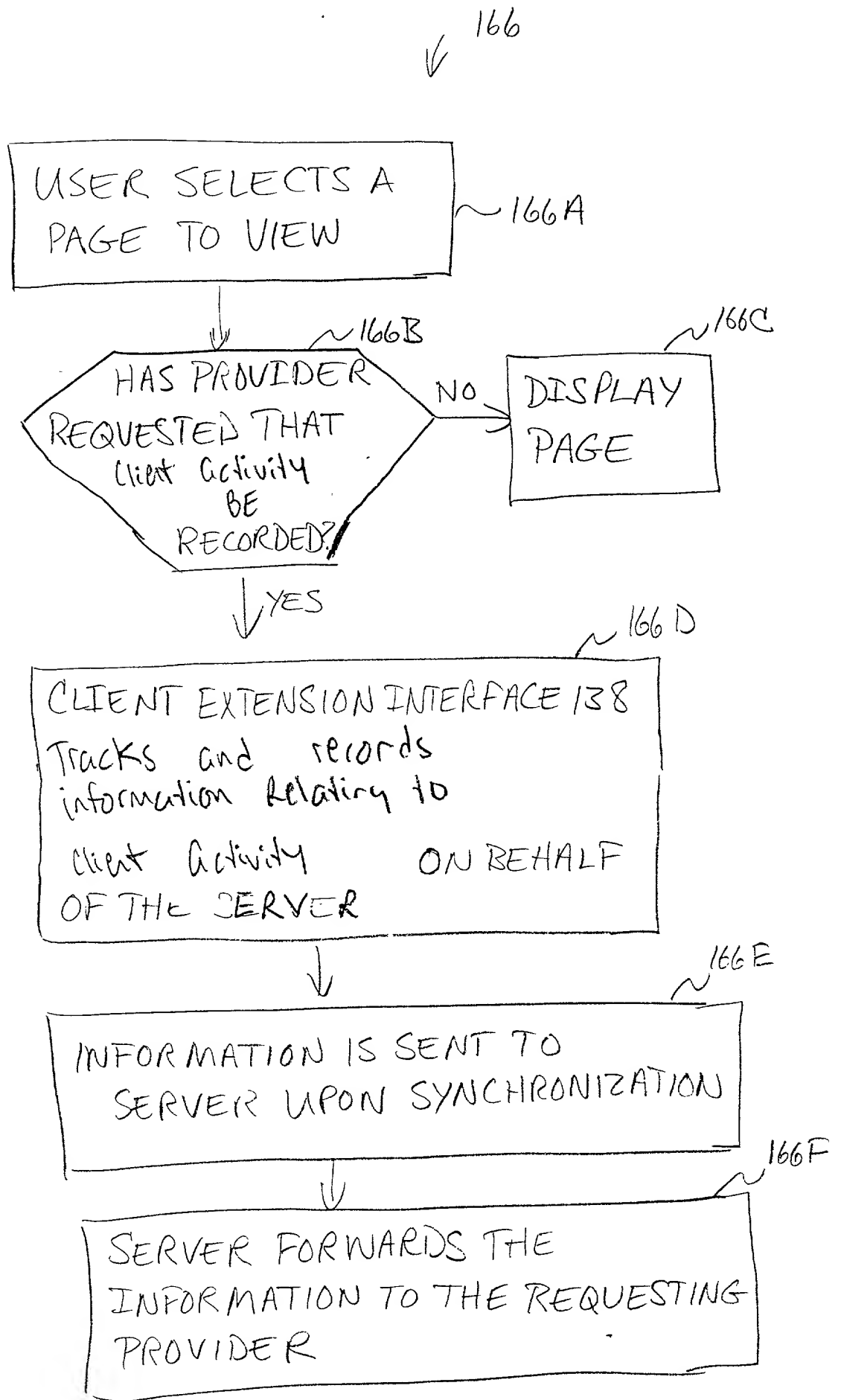


FIG. 1F1

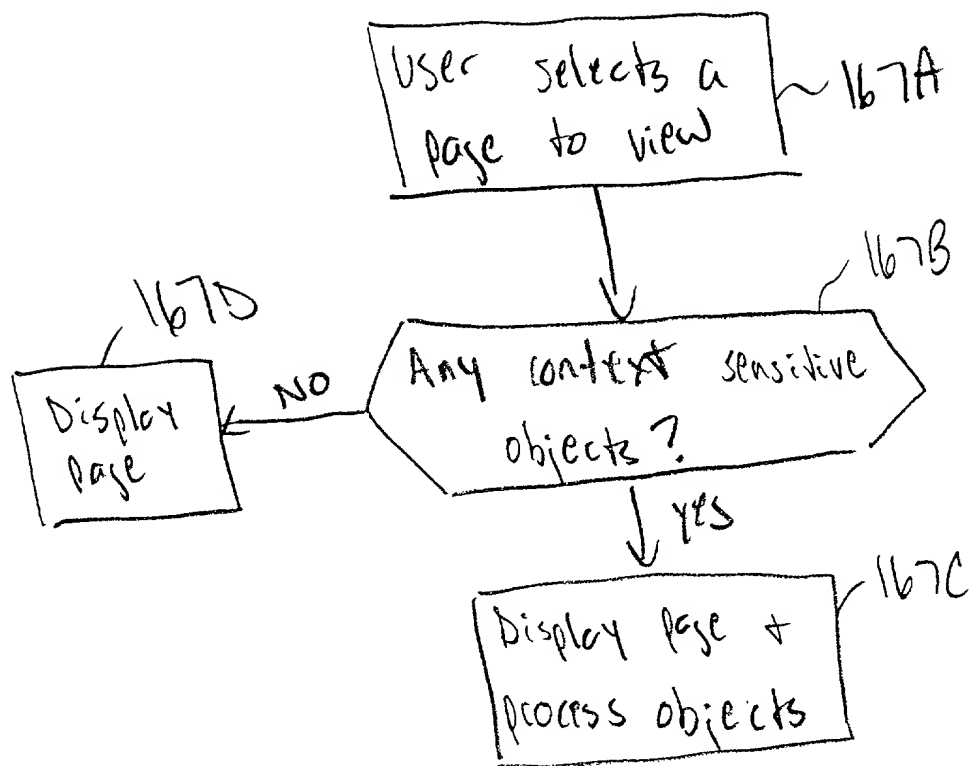


FIG. 1F2



168A

CLIENT INITIALIZES A SYNC  
AND GIVES A SERVER A  
NULL DATA MARKER



168B

SERVER TELLS CLIENT WHICH  
CLIENT DATABASES IT WISHES  
TO TRACK AND SENDS DATA MARKER [C]

FIG. 1G

1707

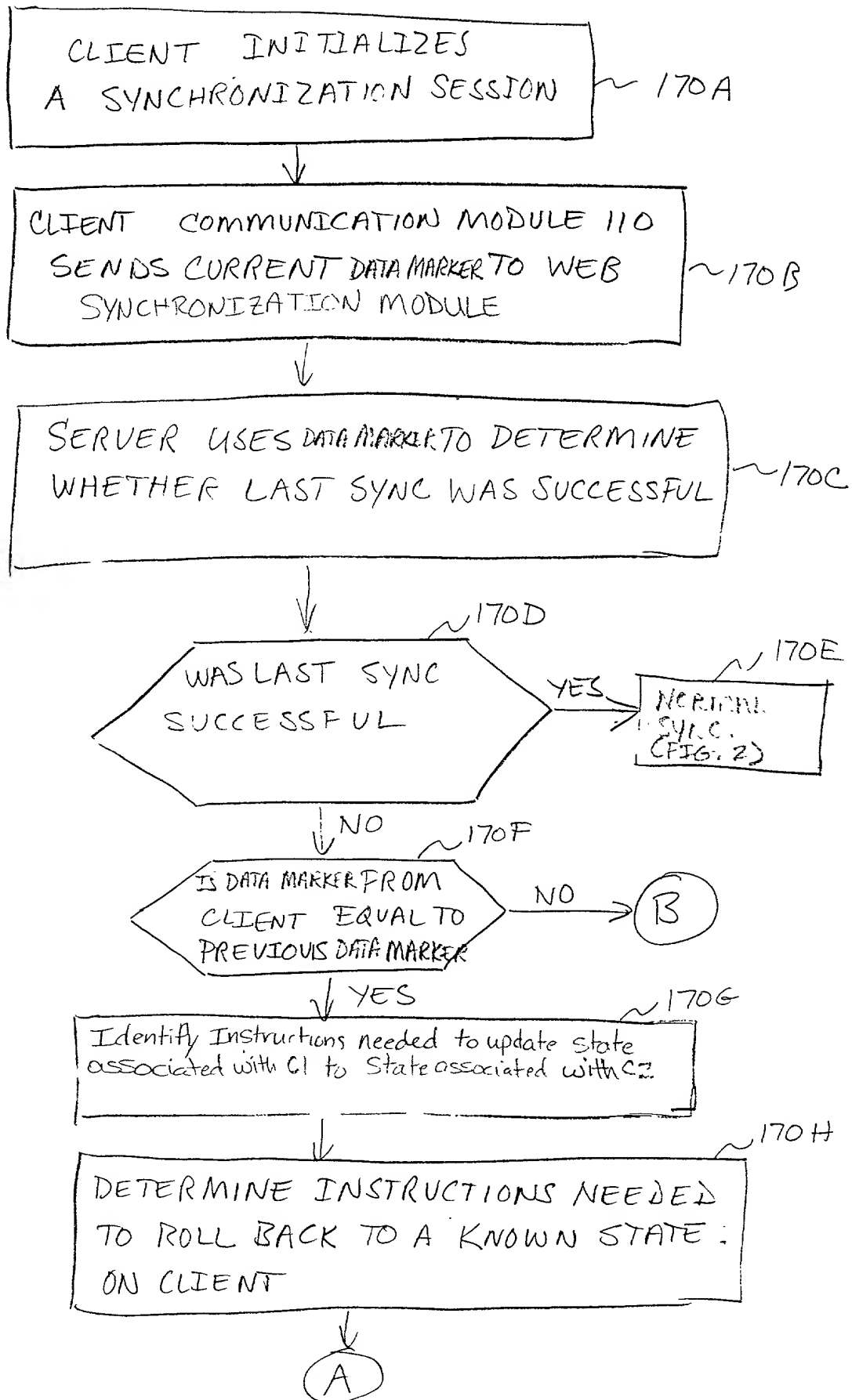


FIG. 1H1

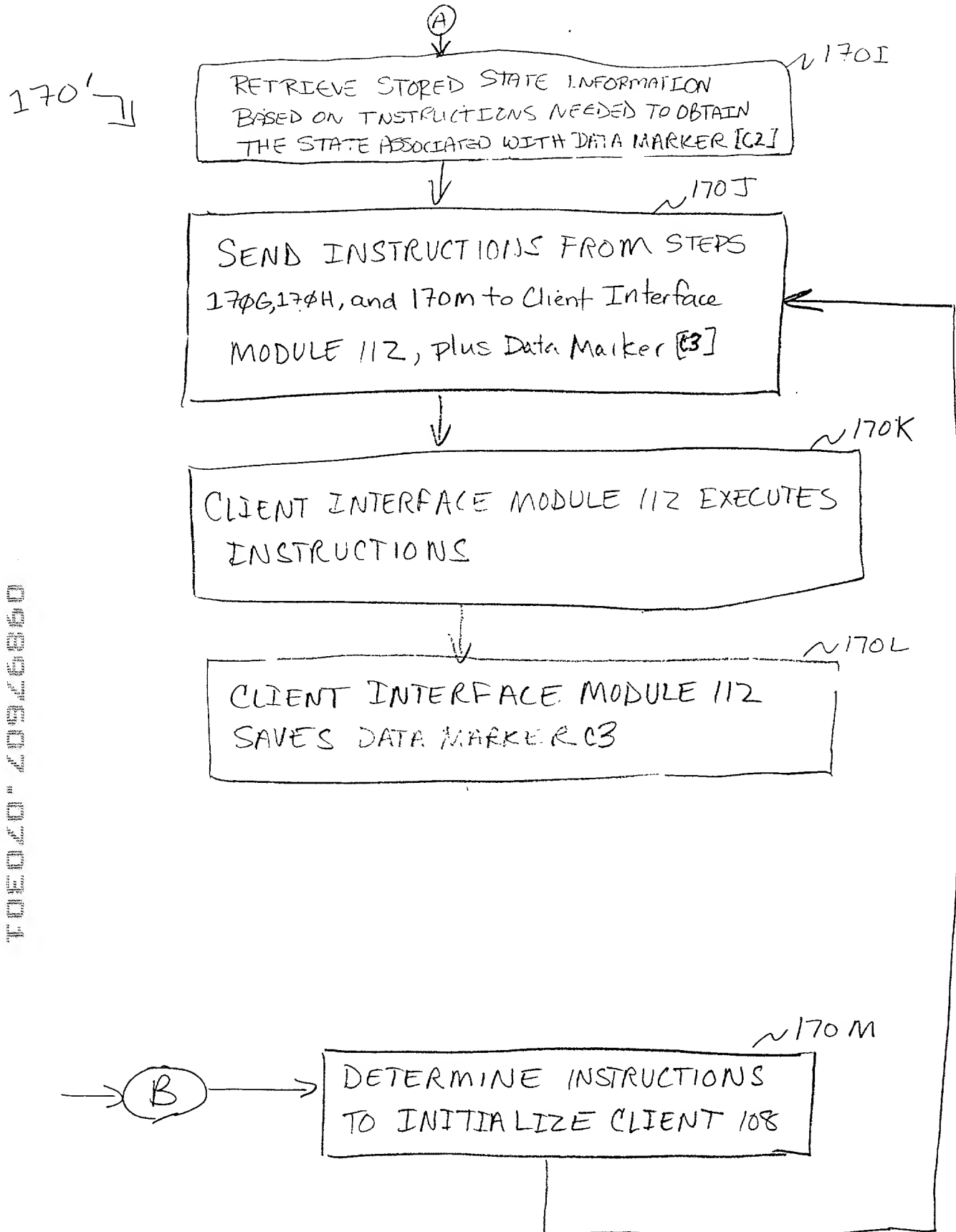


FIG. 1H2

09897507.070301  
T08020.20926860

170E  
~

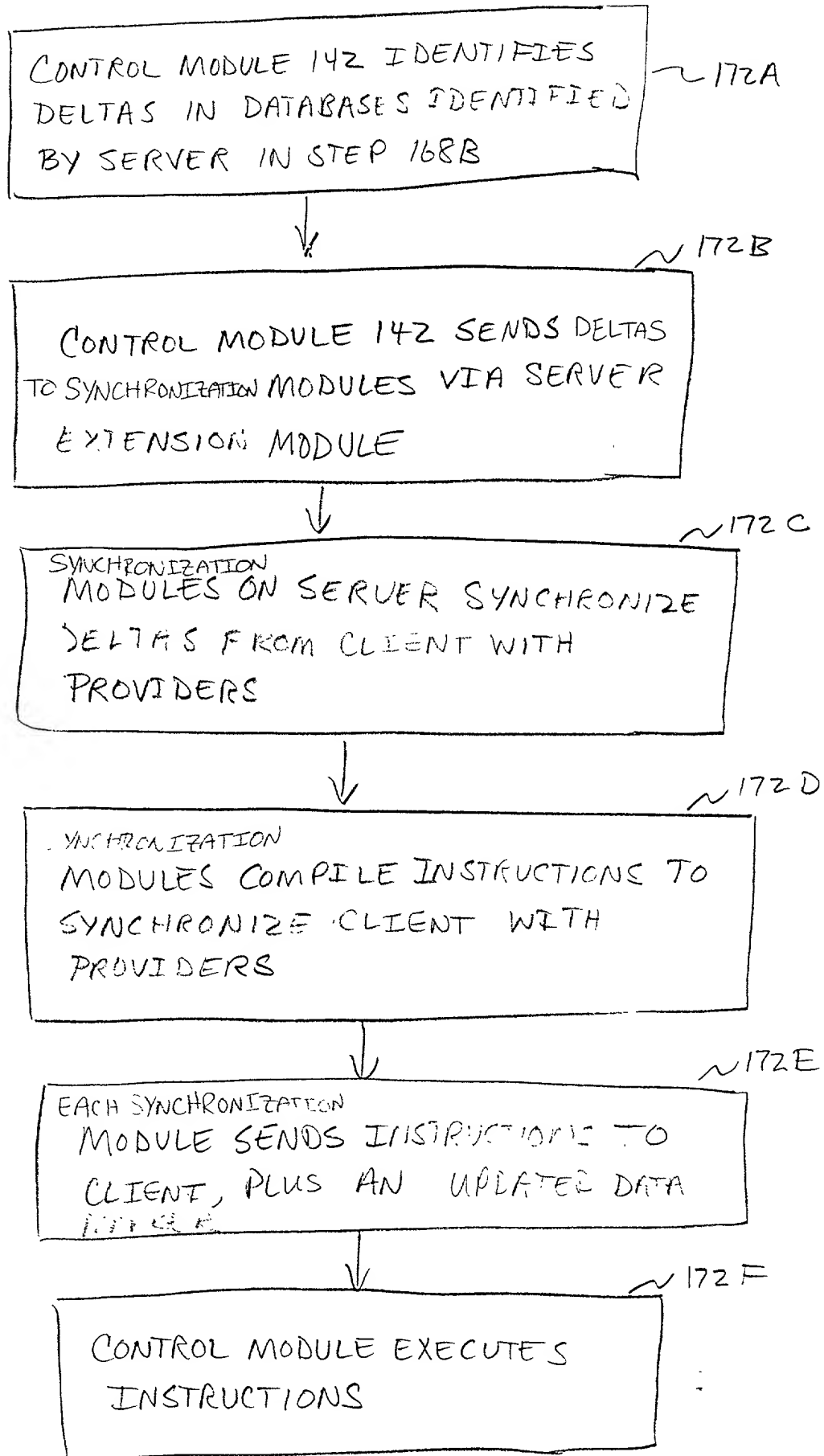


FIG. 1I1

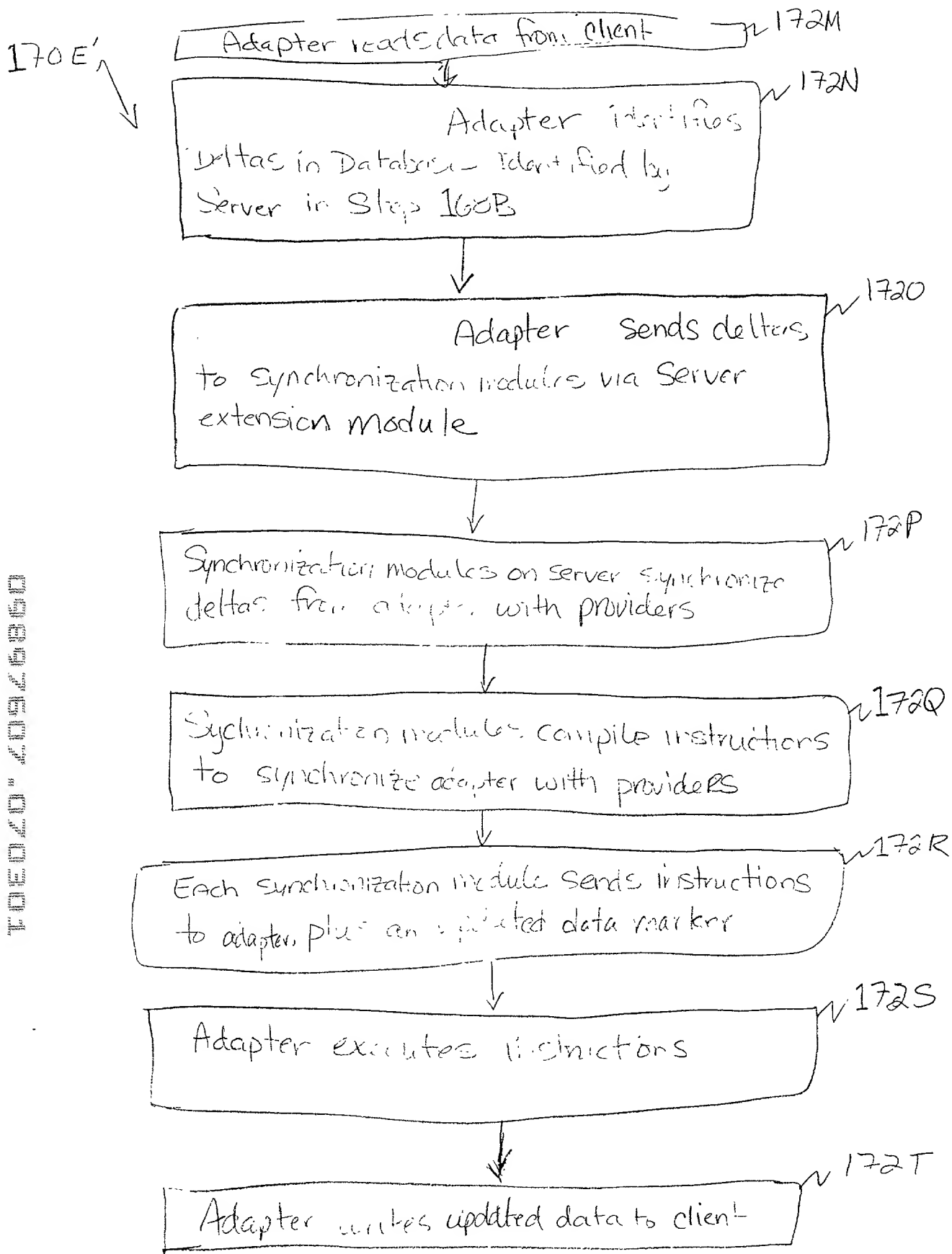


FIG. 1J

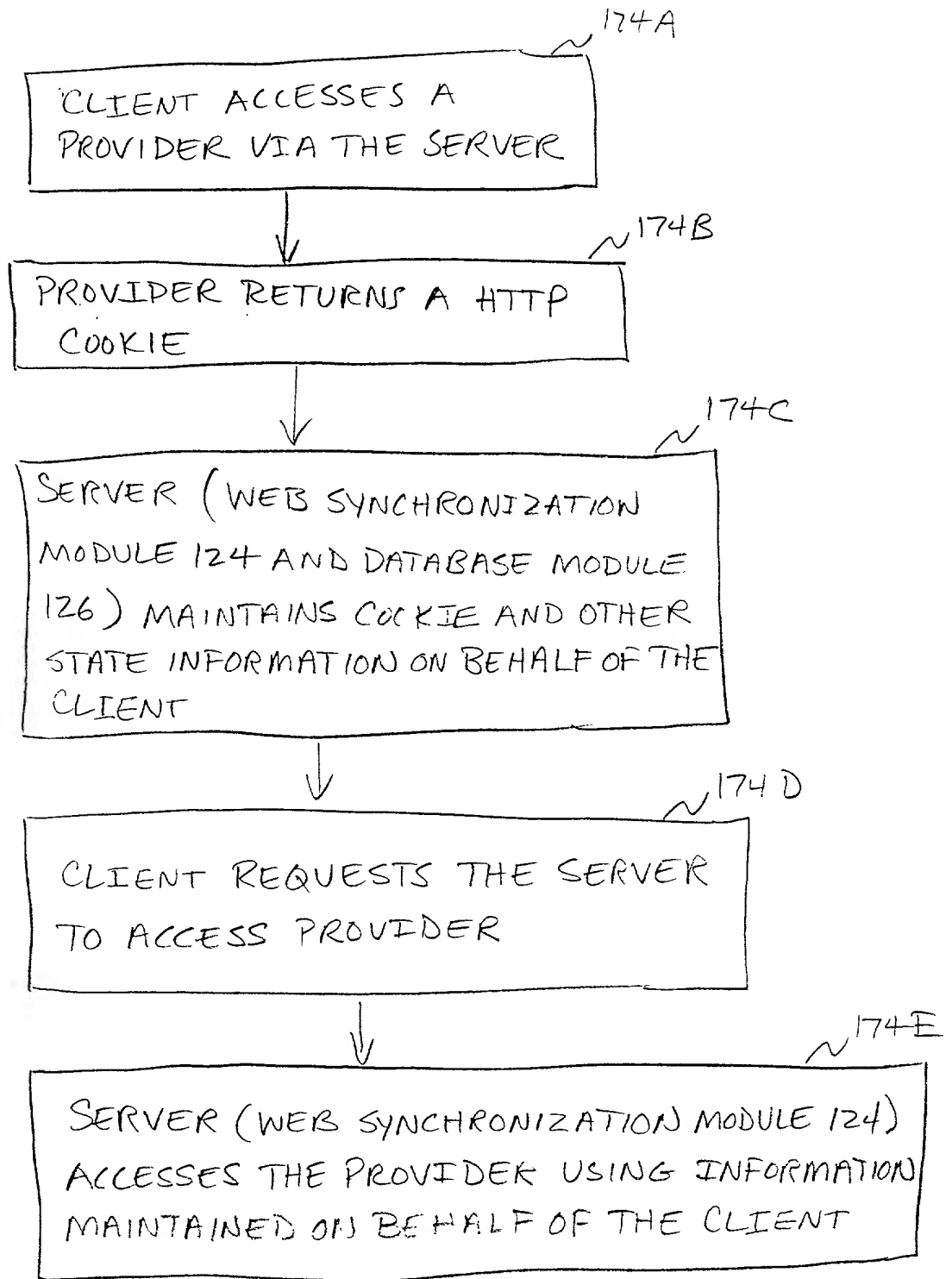


FIG. 1J

09897607.070301

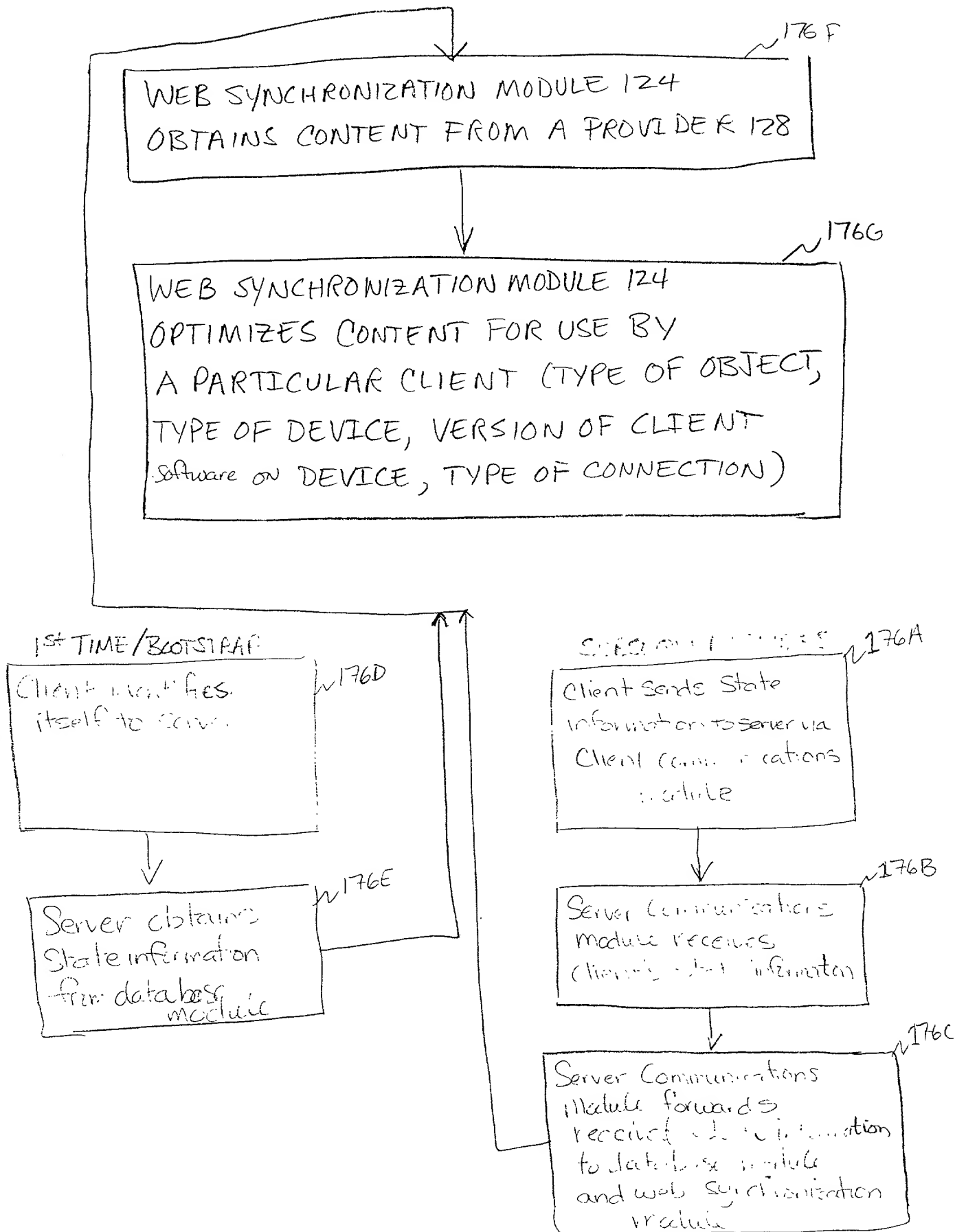
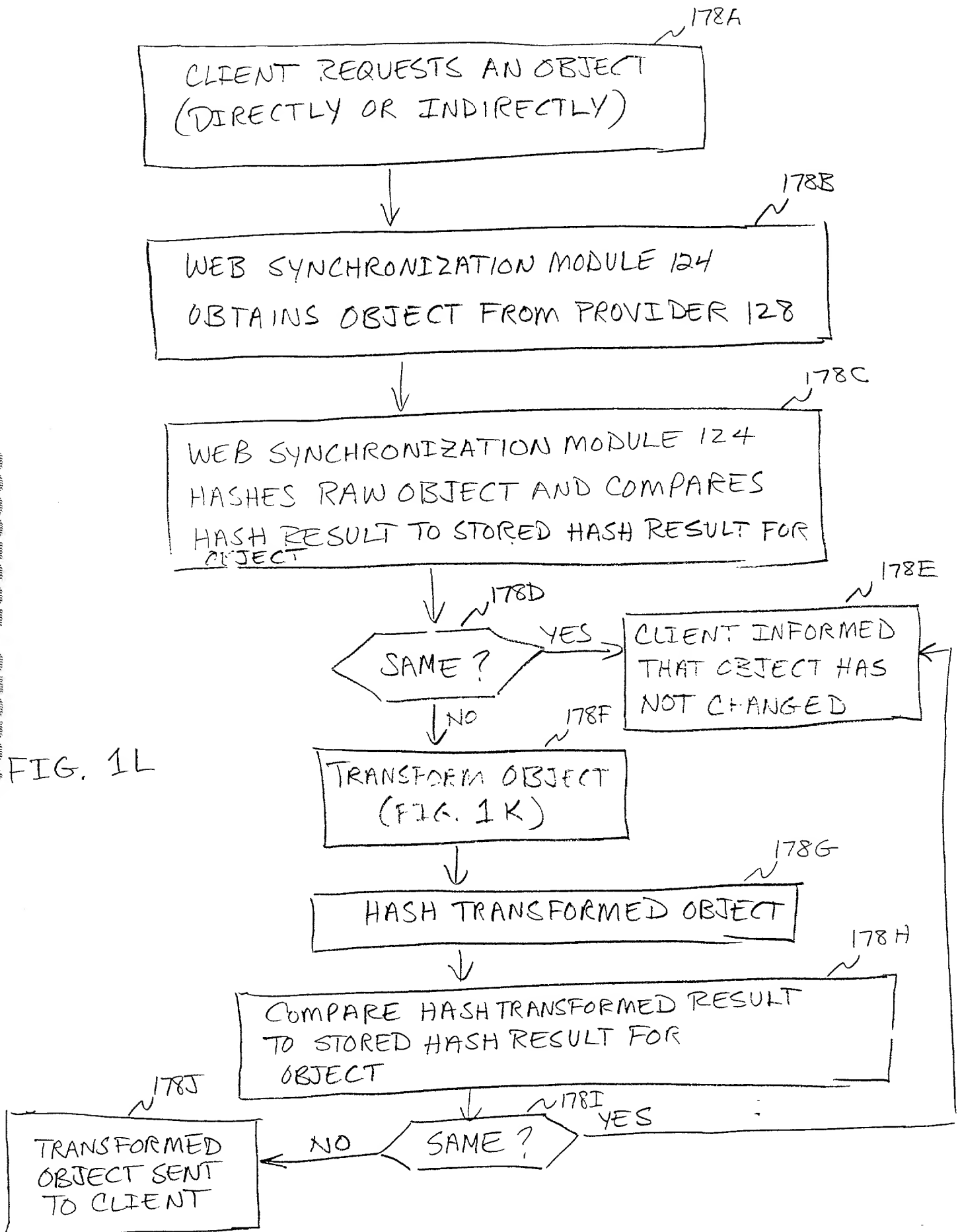
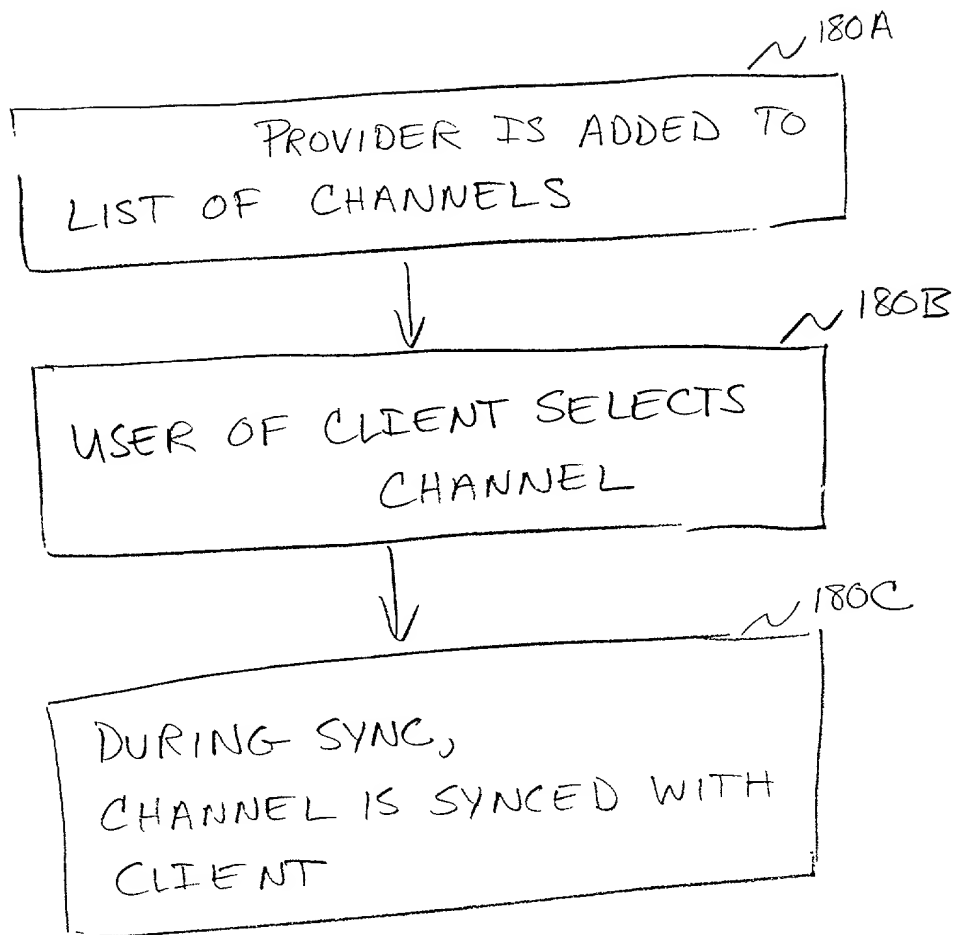


FIG. 1K







- MUSIC
- PHOTO ALBUMS
- BOOKS
- MOVIES
- ETC.

FIG. 1M

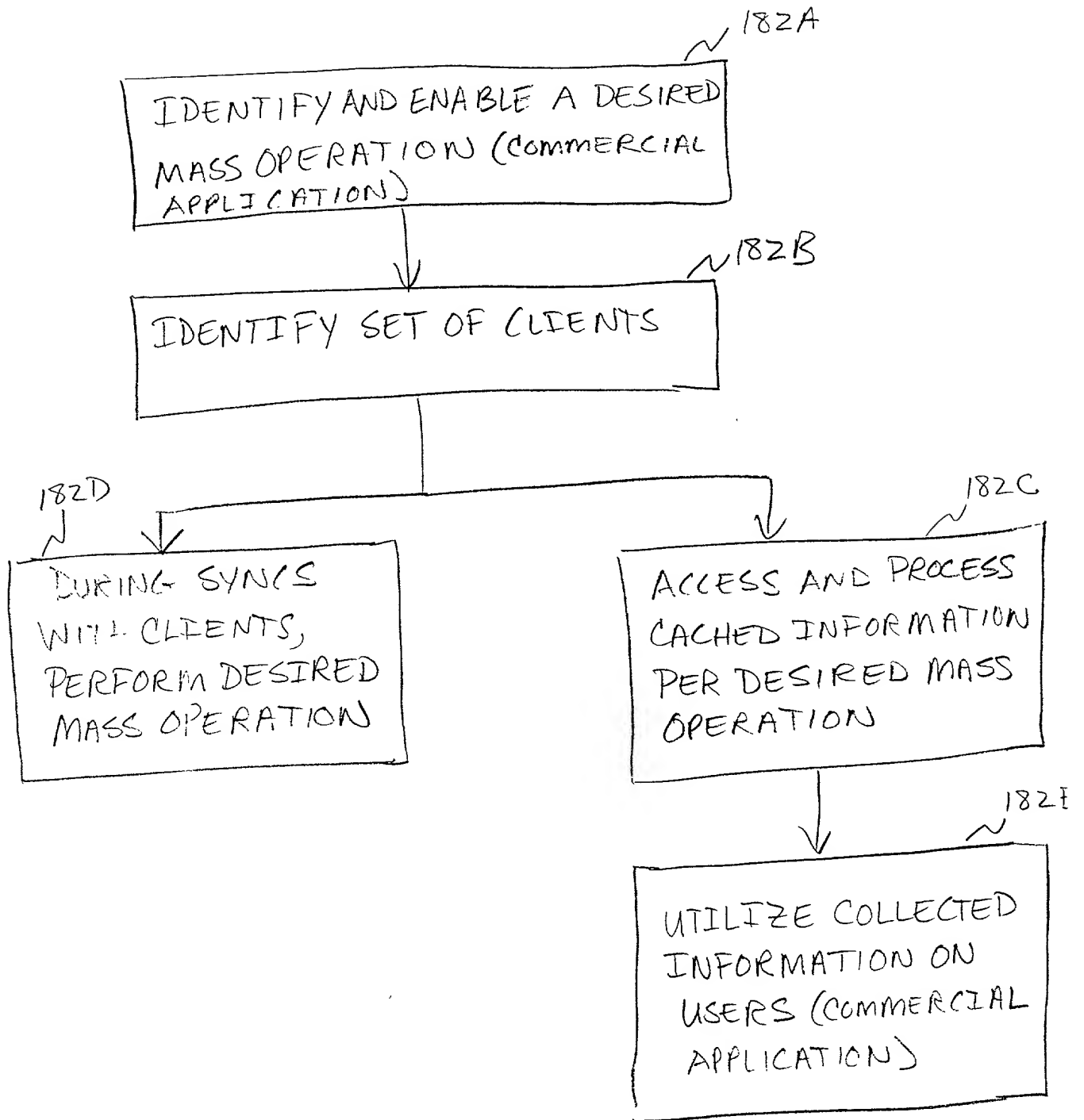
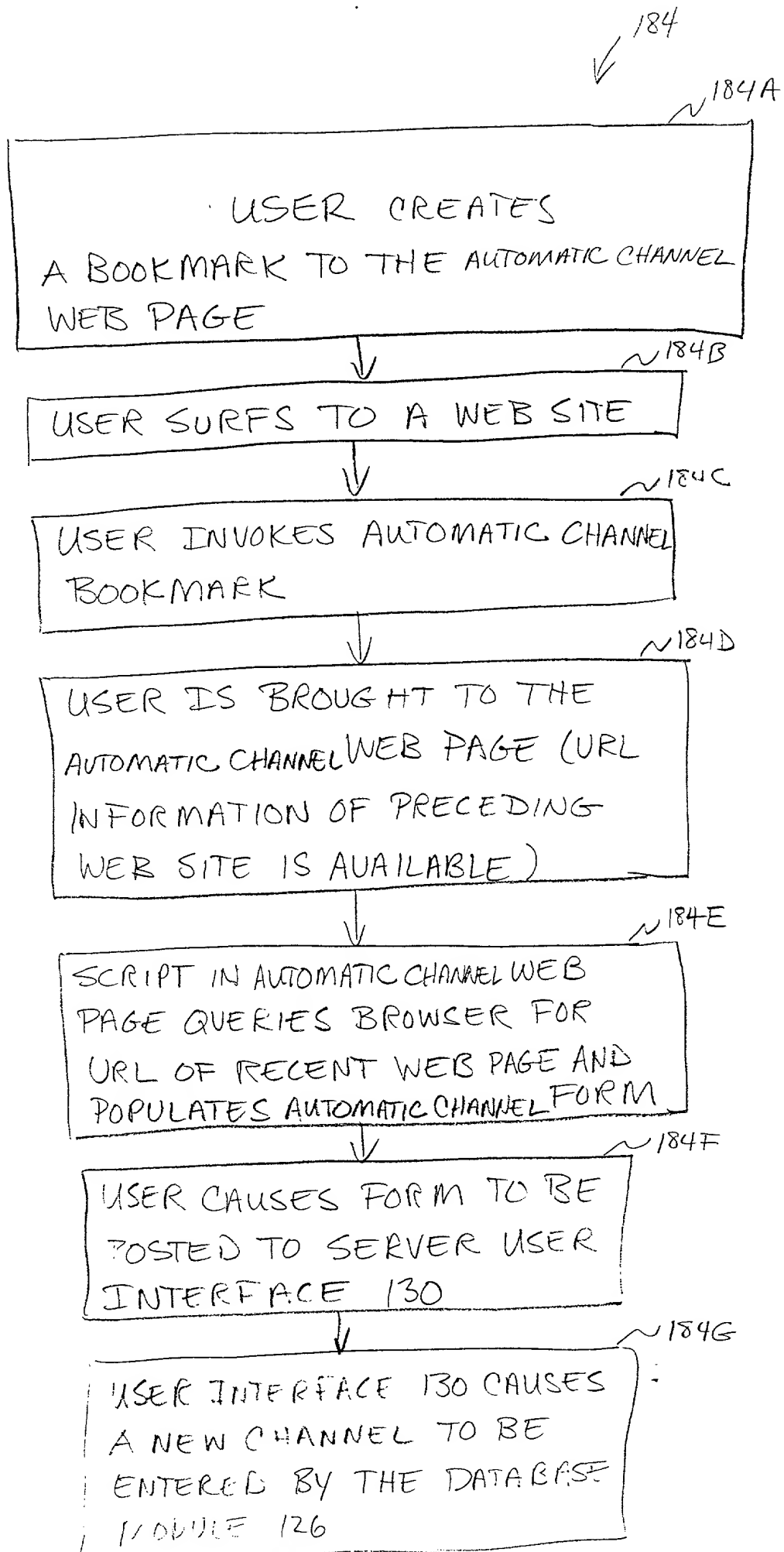


FIG. 1N



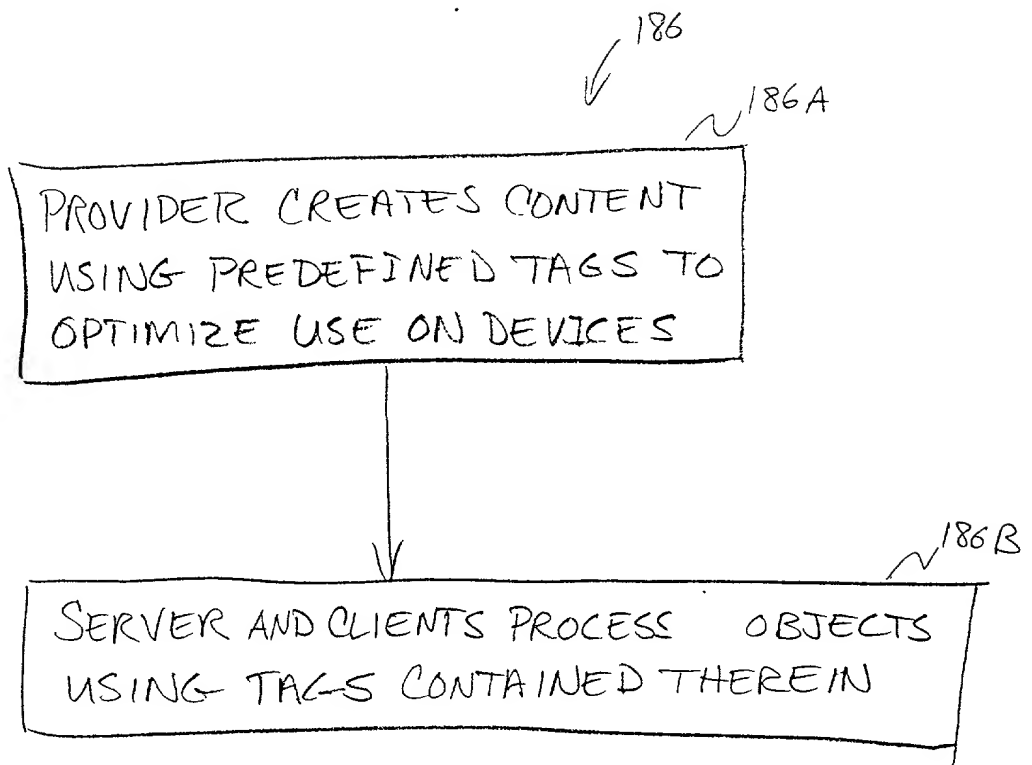


FIG. 1P

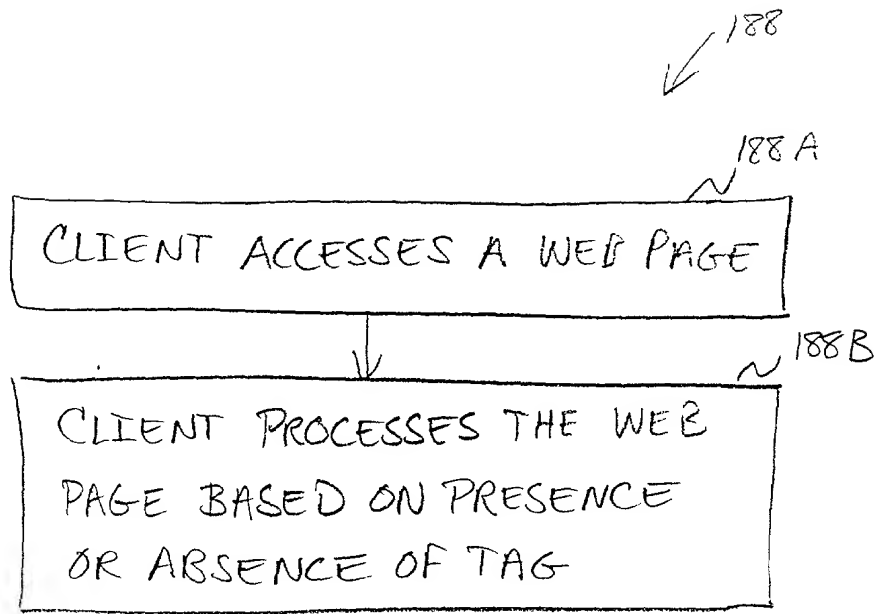


FIG. 1Q

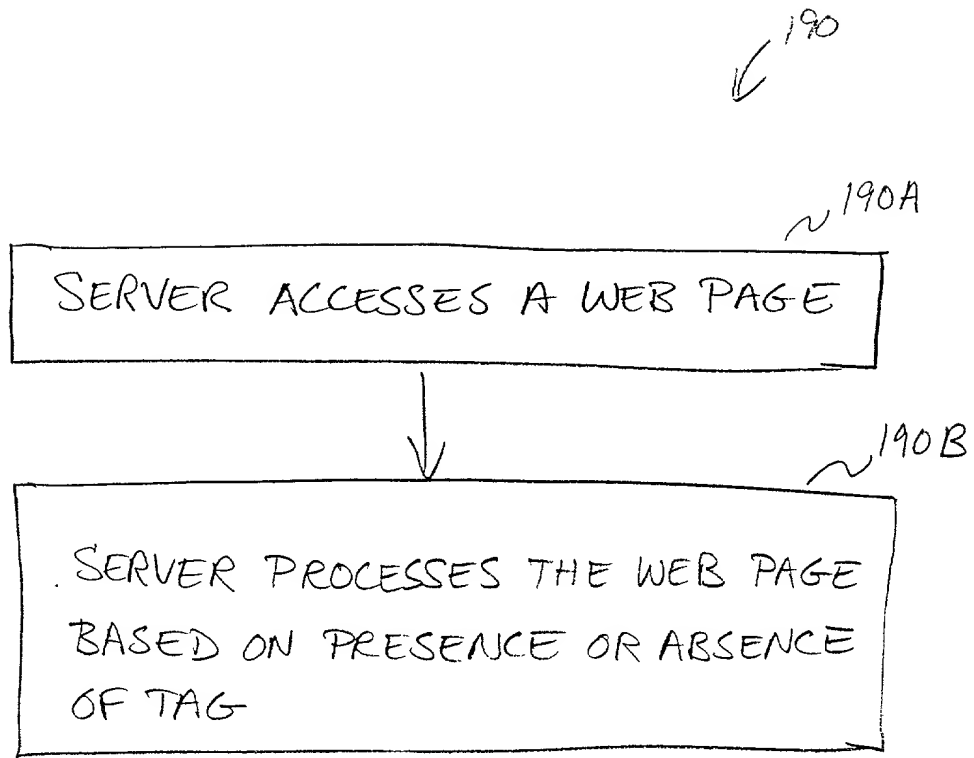


FIG. 1R

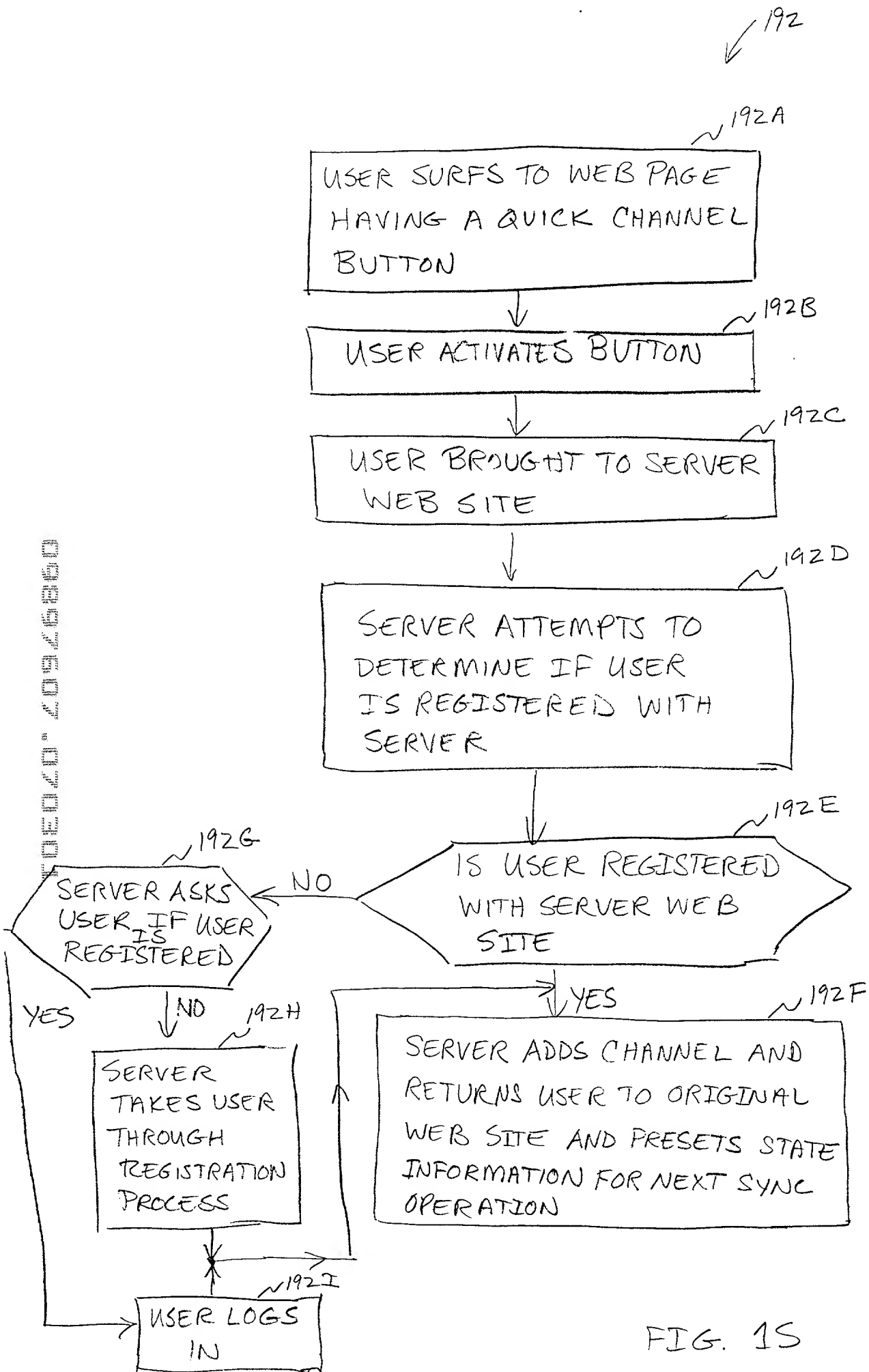


FIG. 15

FIG. 1T

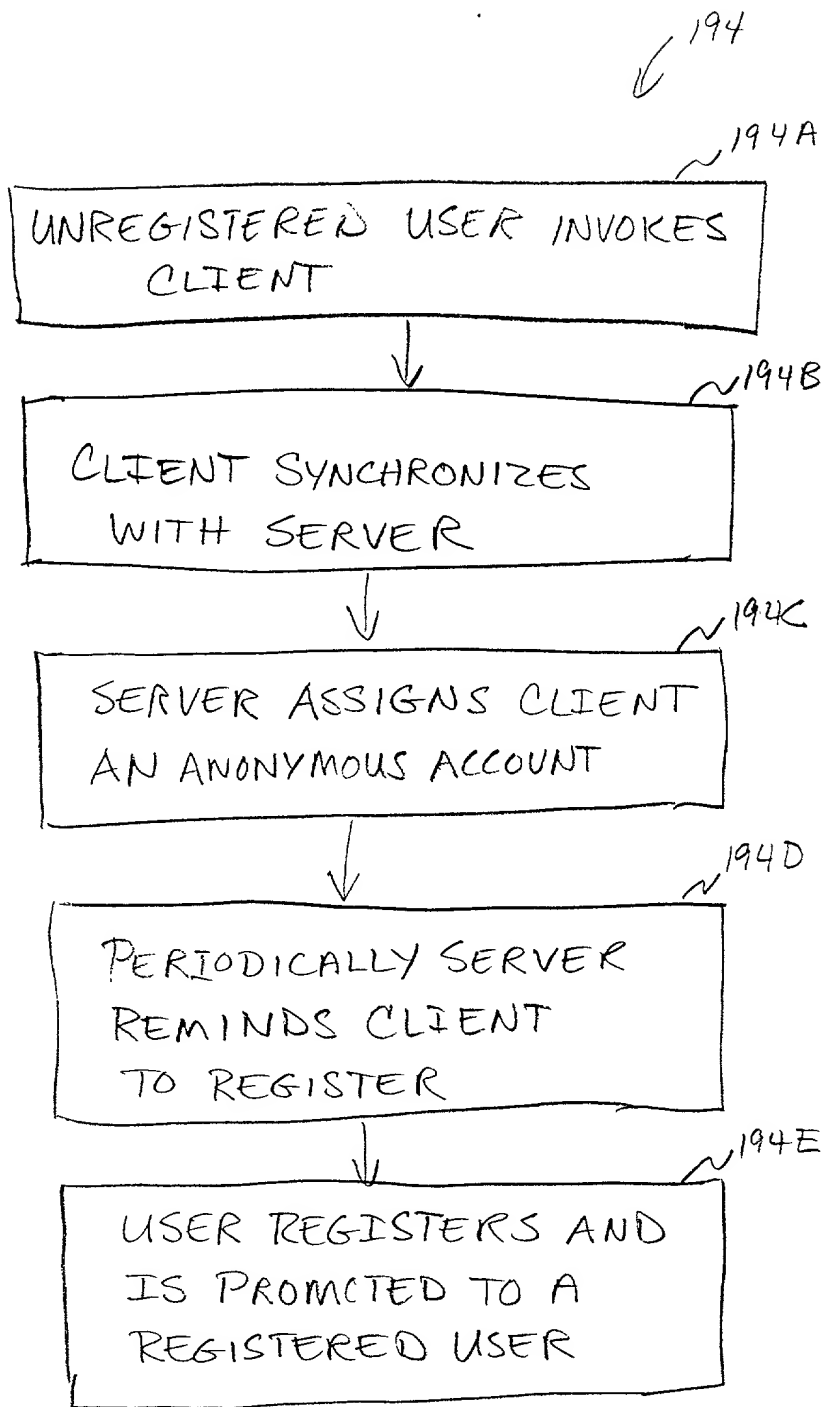


FIG. 1T



Core Technology: Placing Internet/  
Intranet Content on Mobile Devices

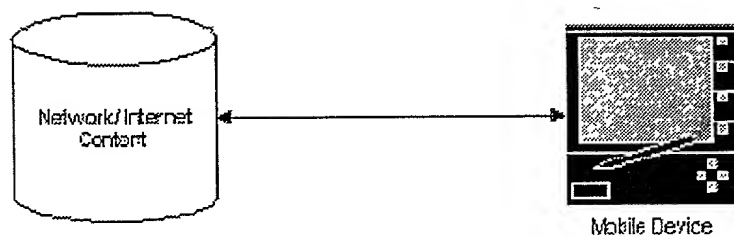


FIG. 1u

## Mobile Device/Server Environment

Mobile Devices in a Client Server Environment

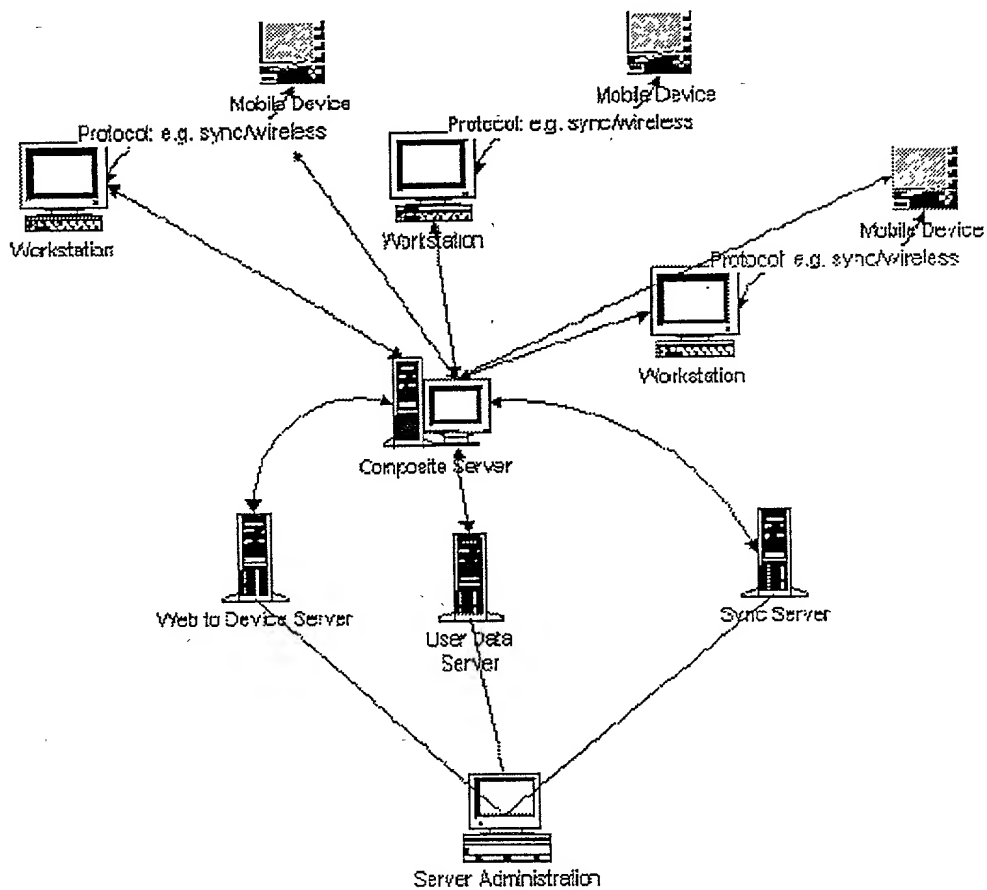


FIG. 1V

# Downstream Protocol

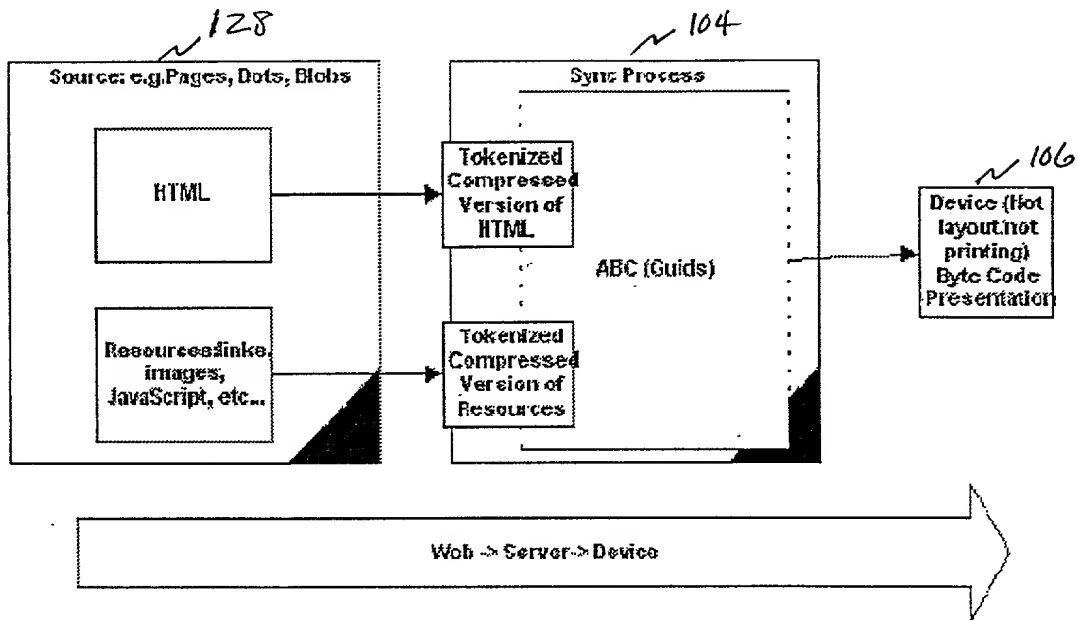


FIG. 1W

09697607.0/0301

# One Up/One Down Sync

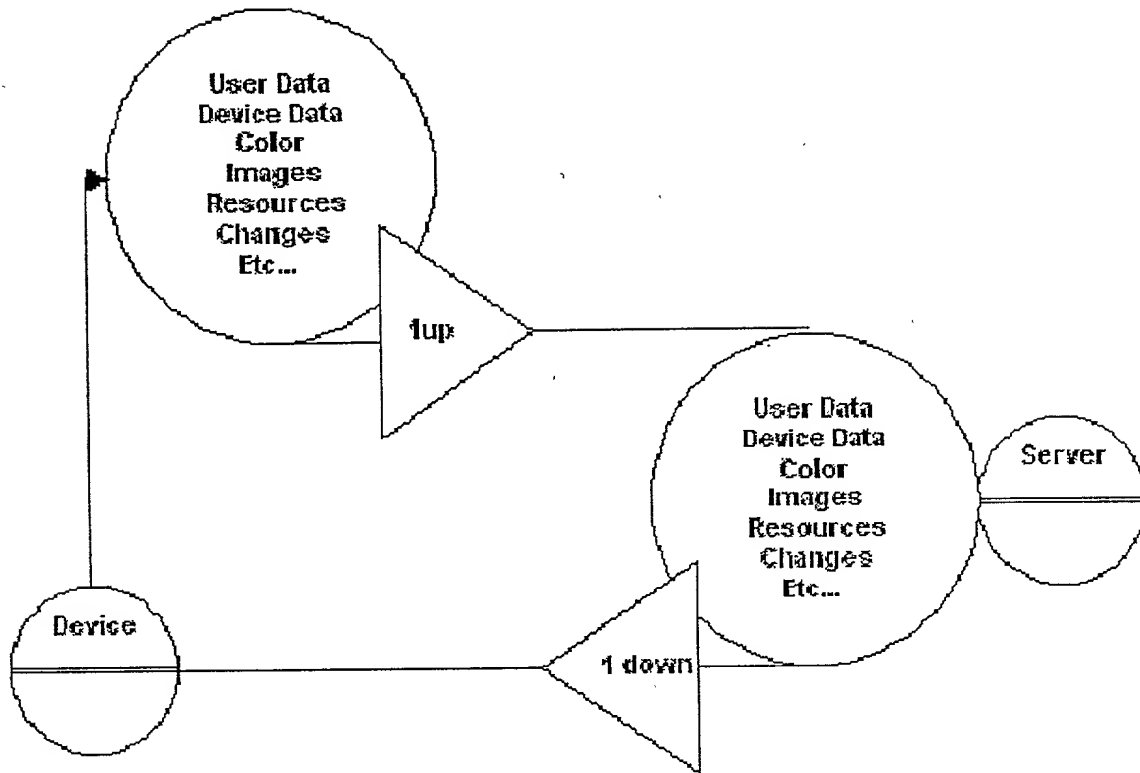


FIG. 1X

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# Sync Process

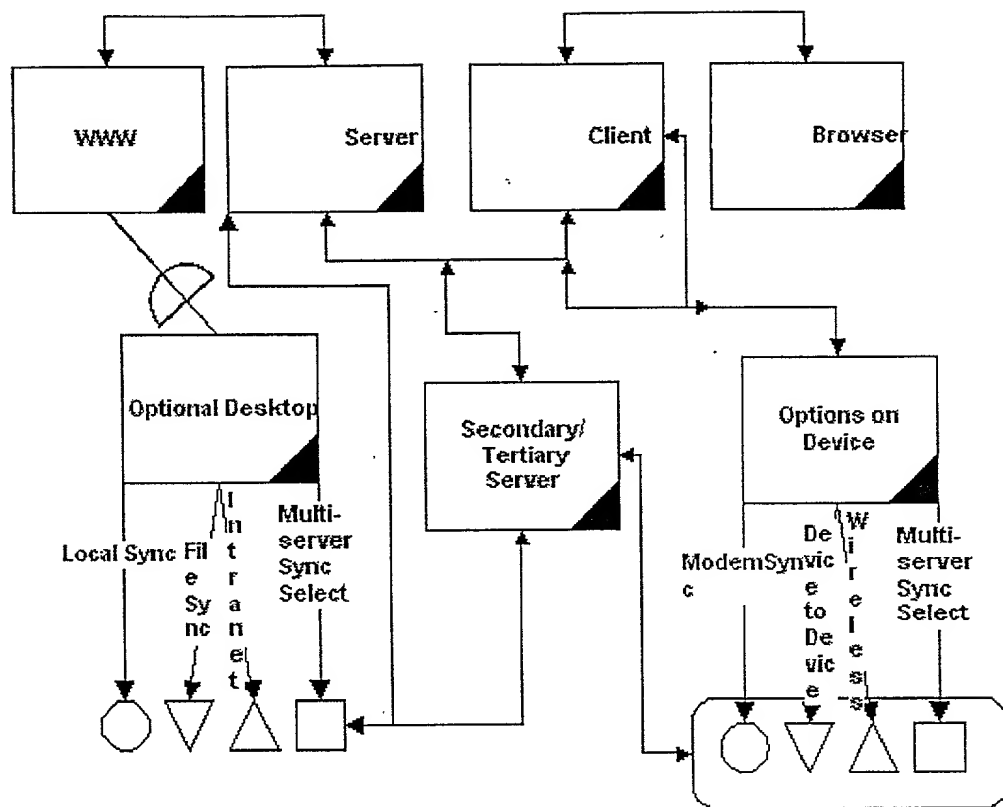


FIG. 14

## Granular Variable Protocol

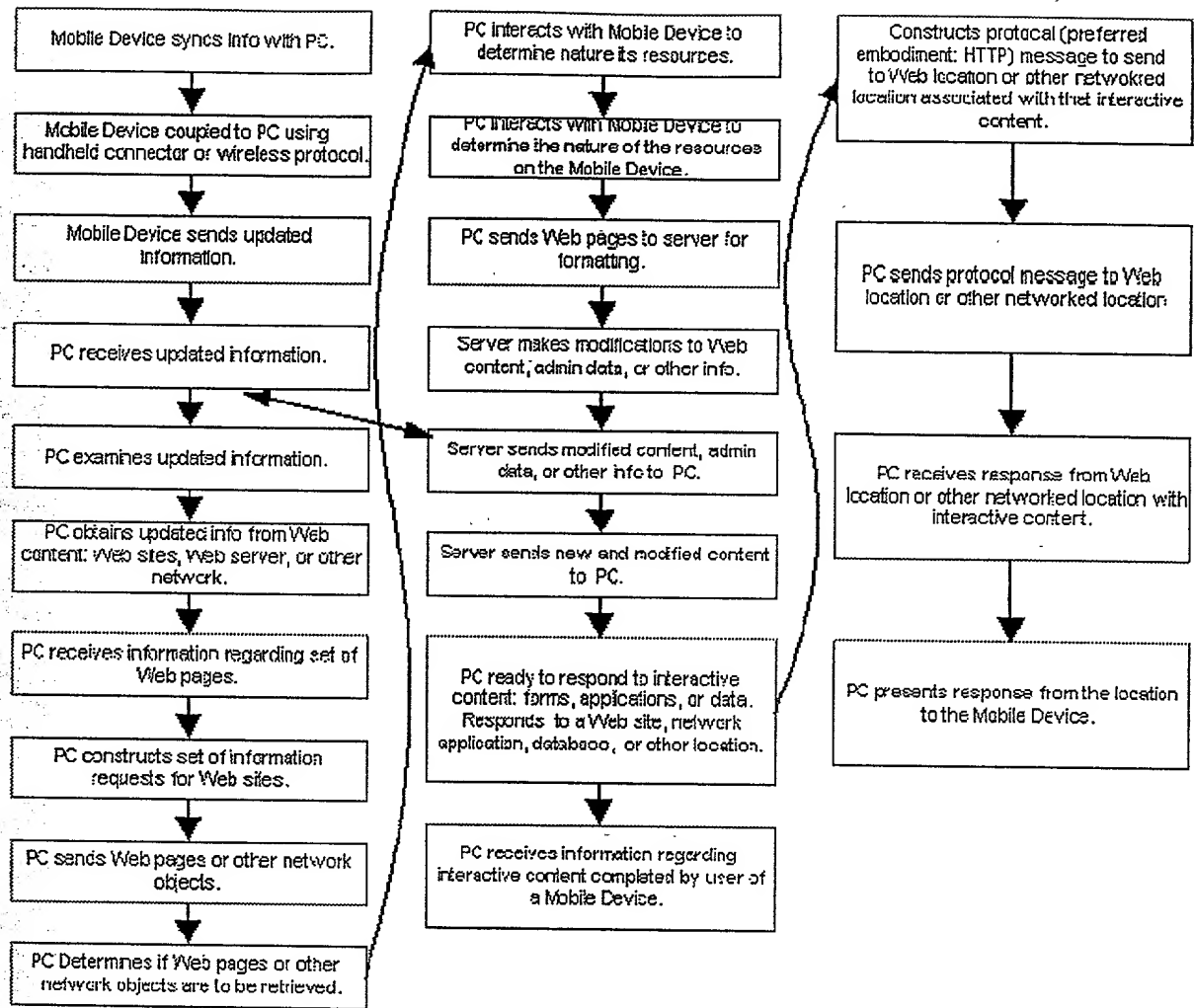


FIG. 17

# Optimization: An Example

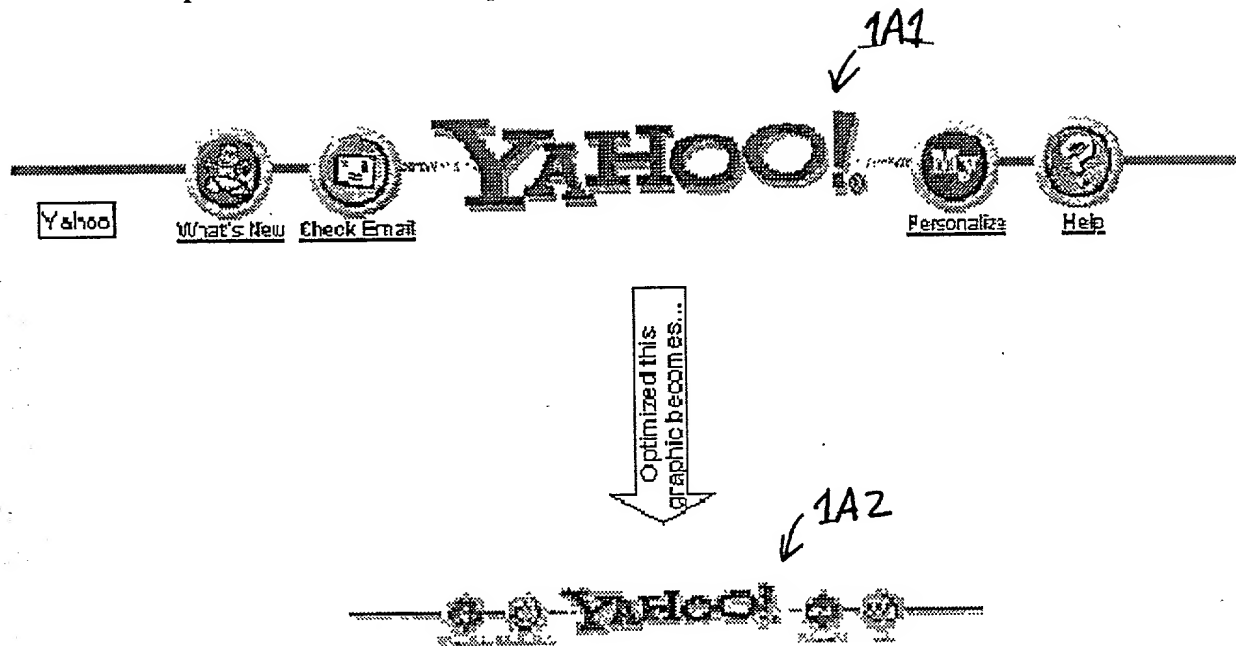


FIG. 1AA

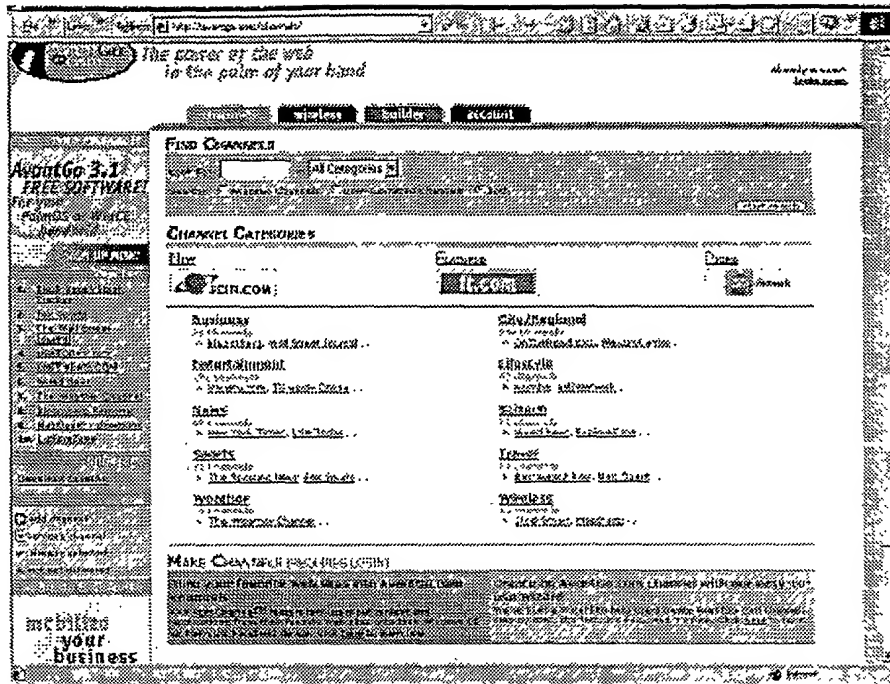
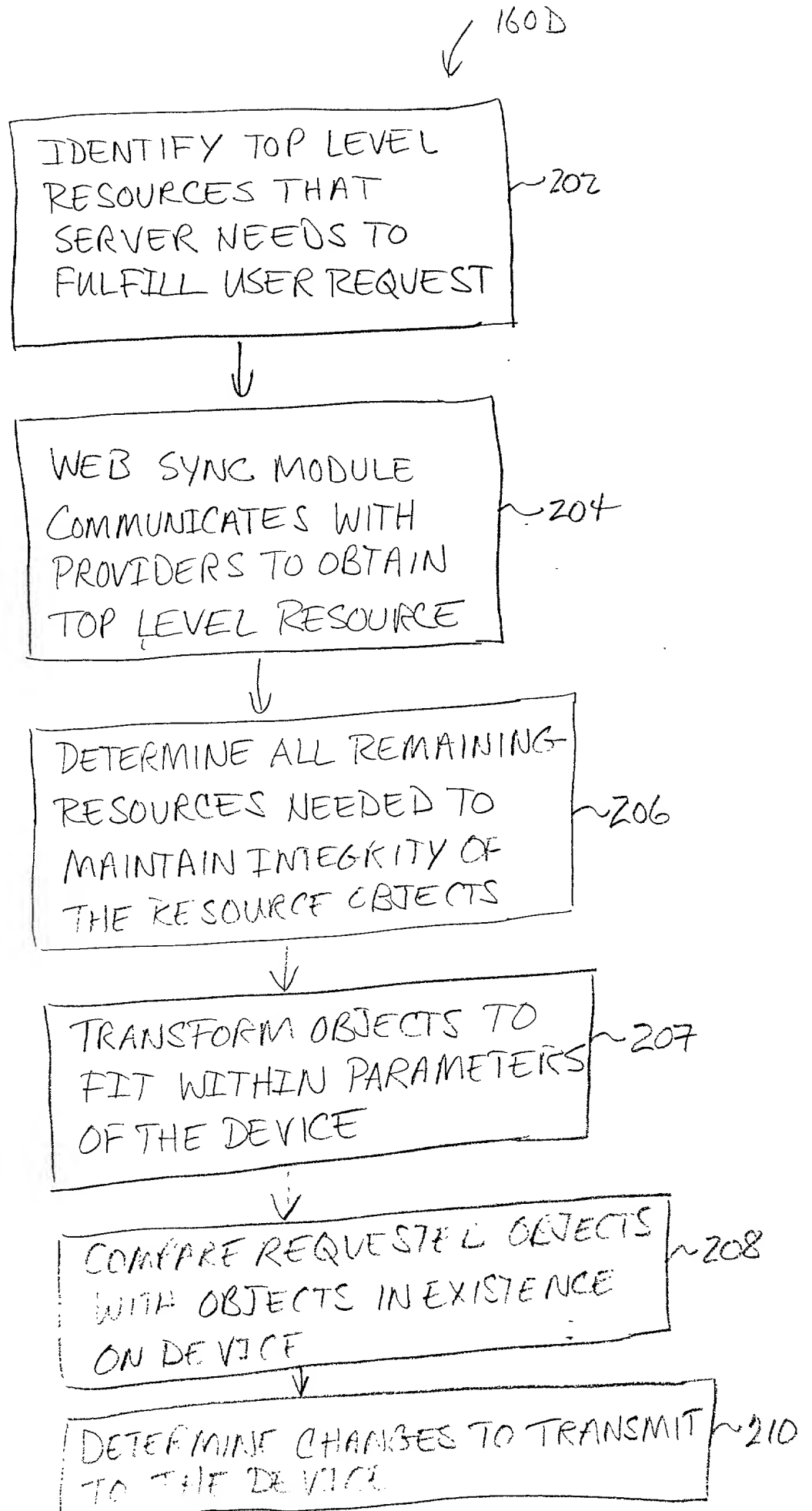


FIG. 1AB





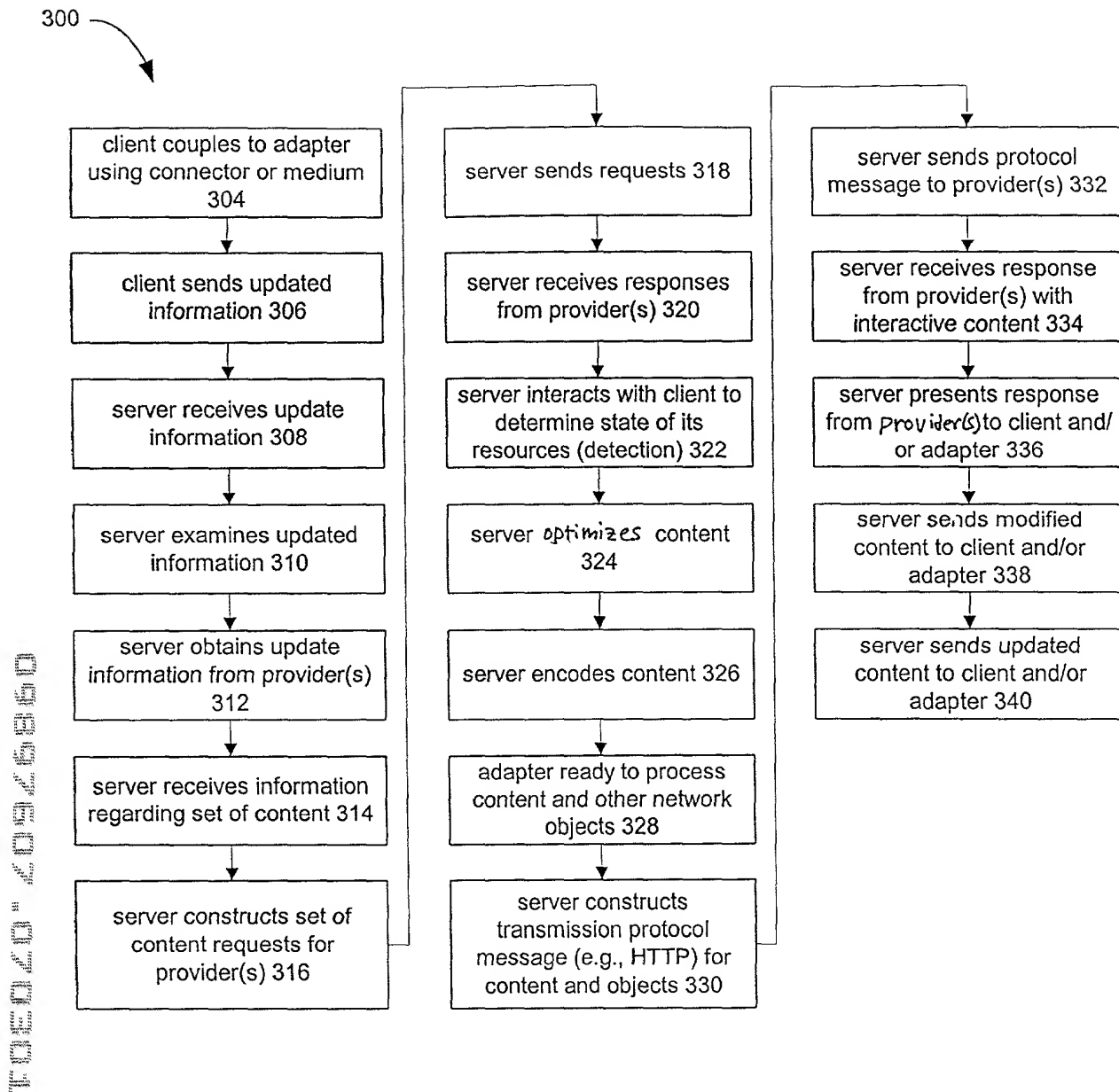


FIG. 3A

Serving XML to Device

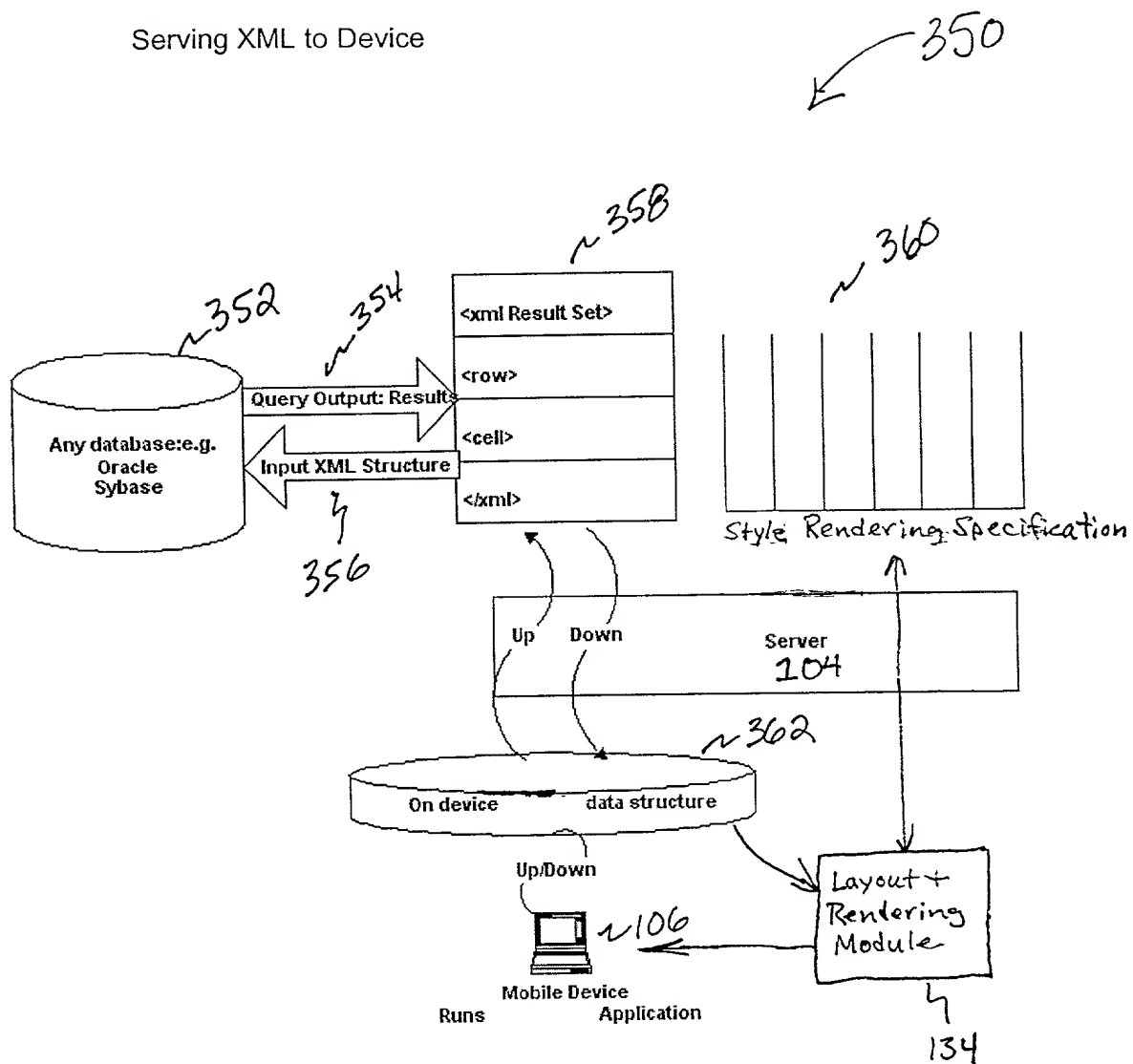


FIG. 3B



FIG. 4A

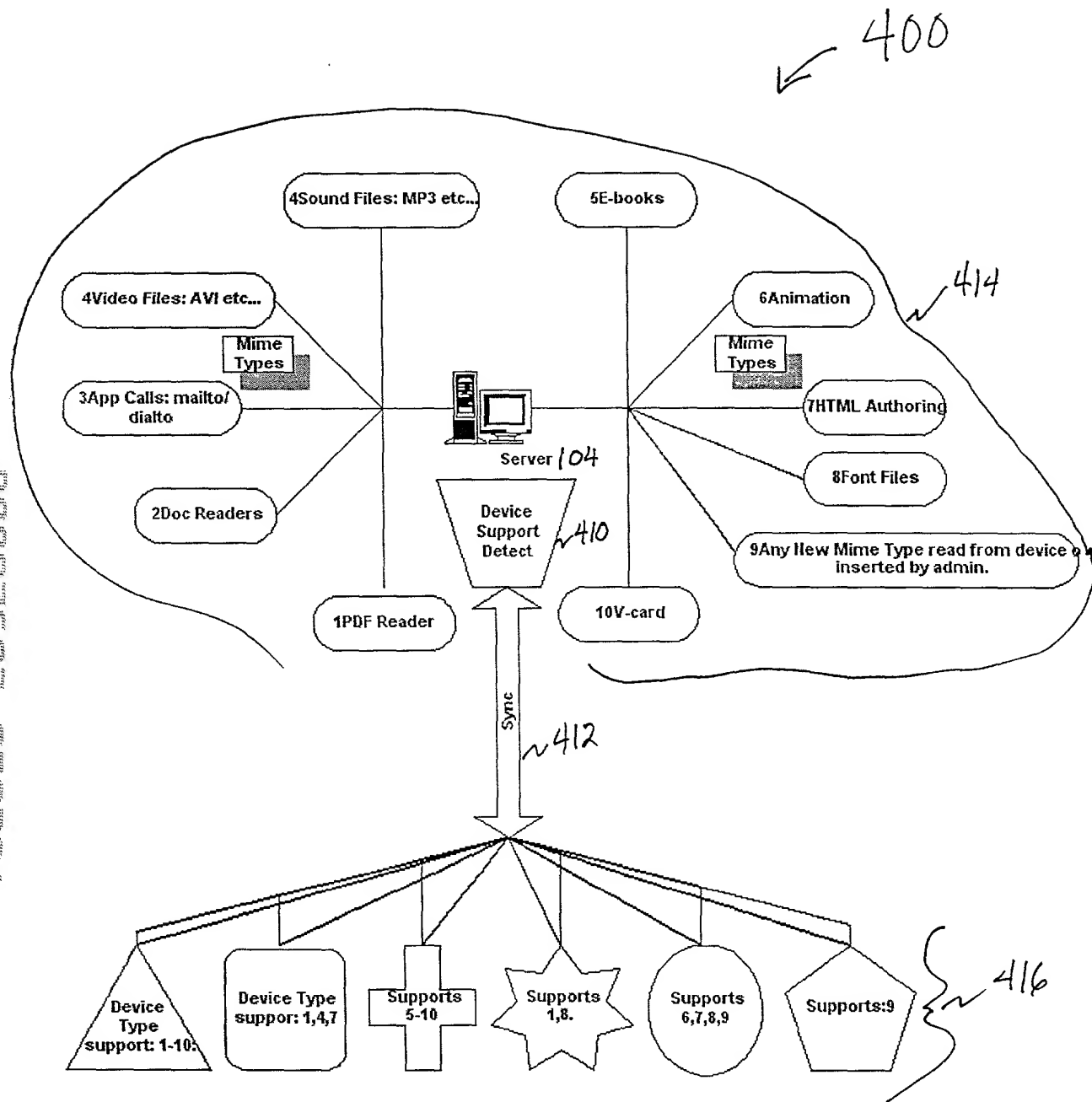


FIG. 4A

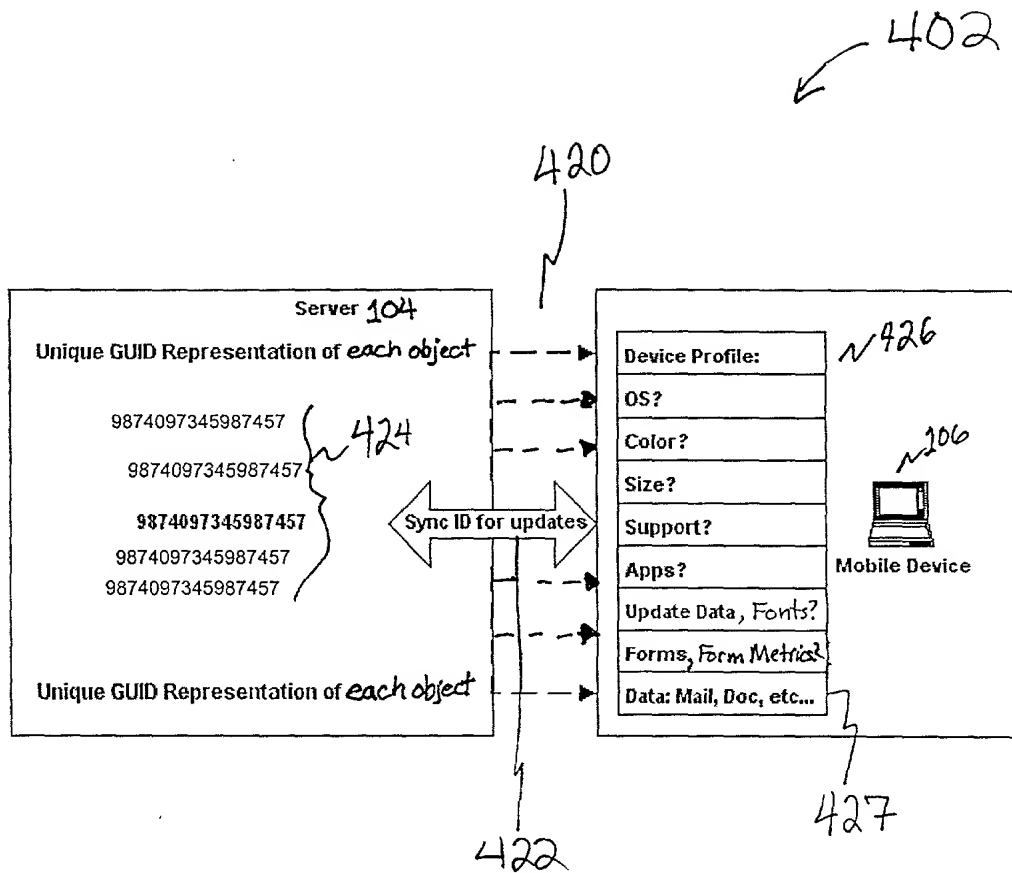
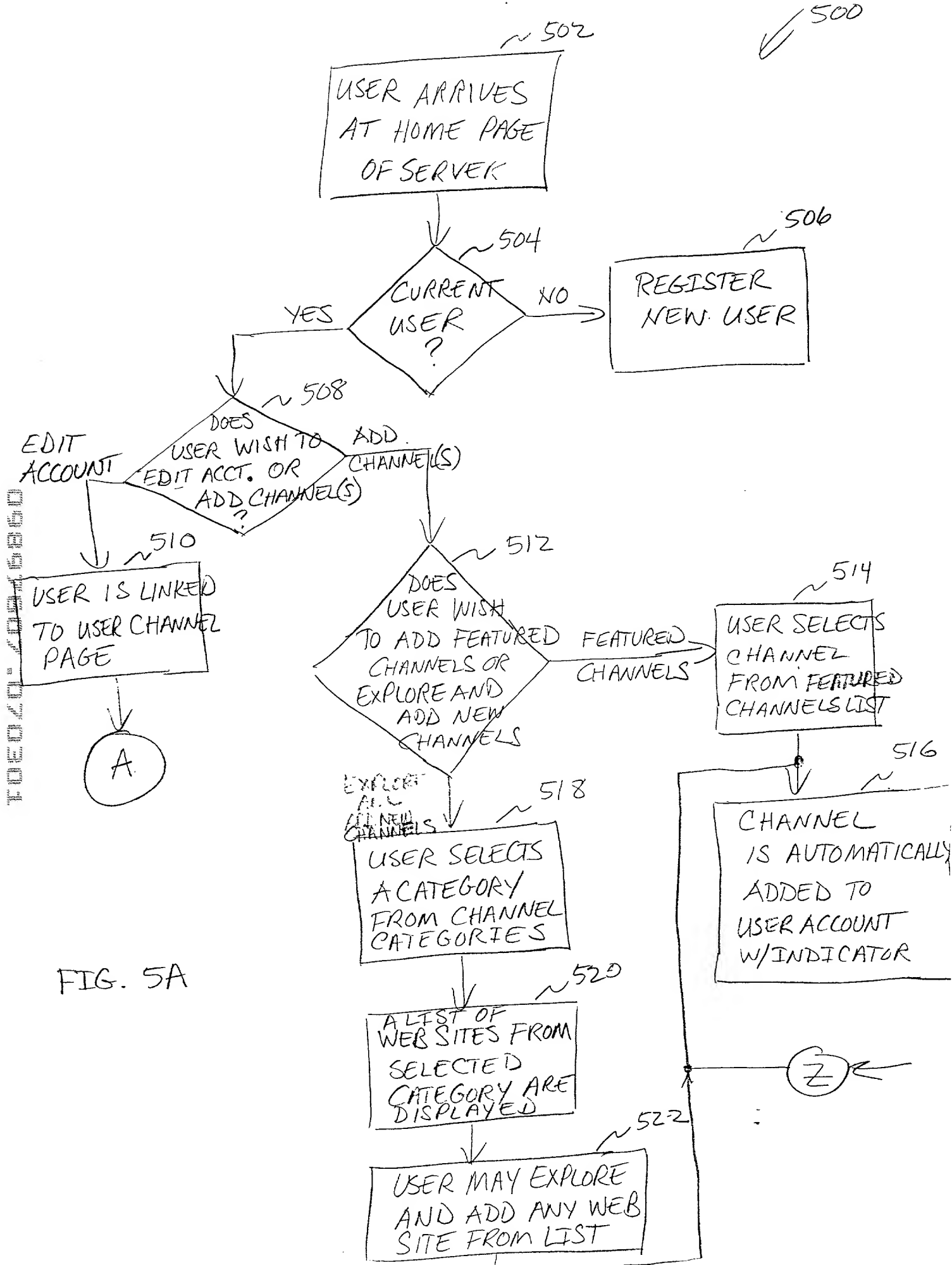


FIG. 4B



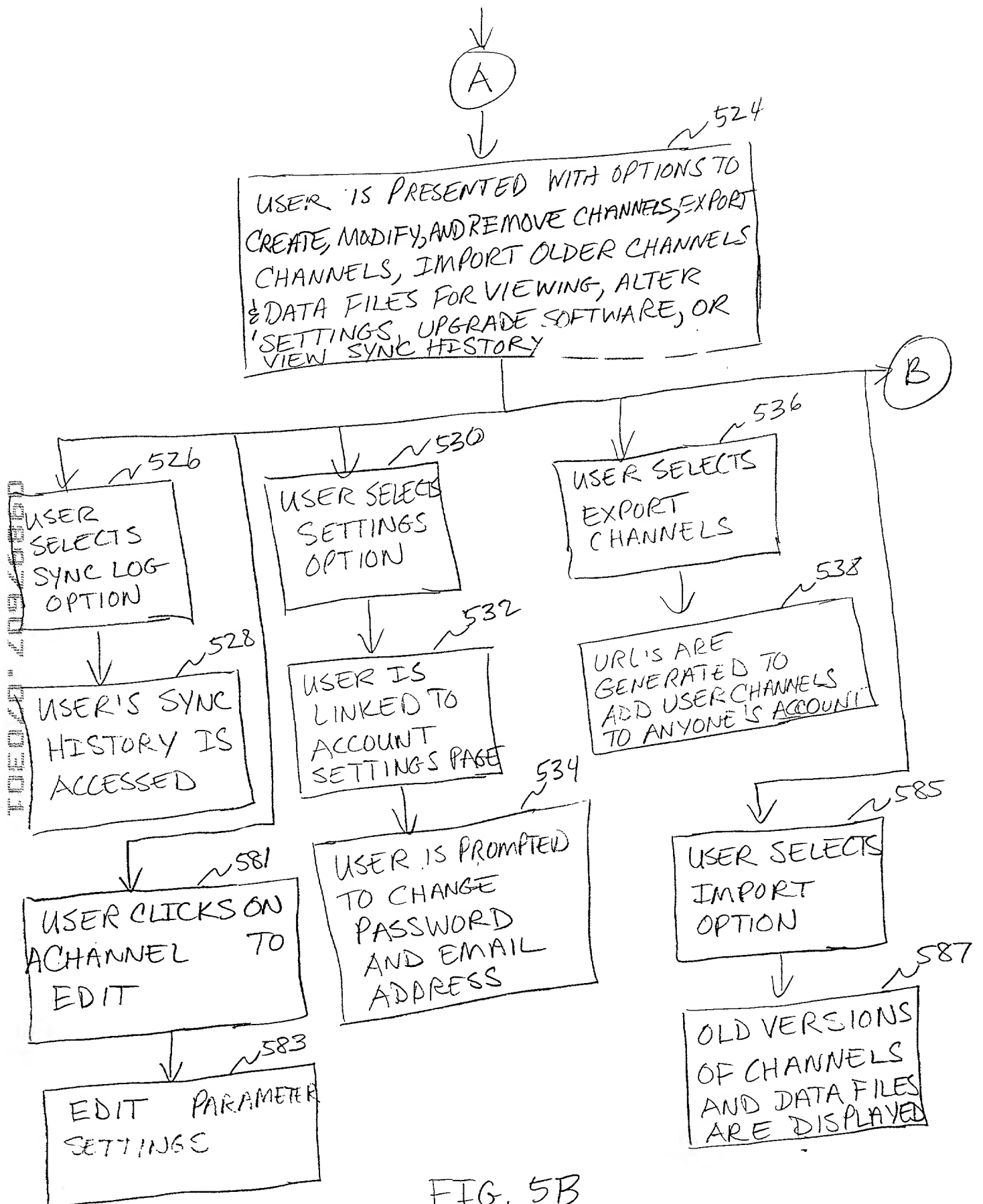
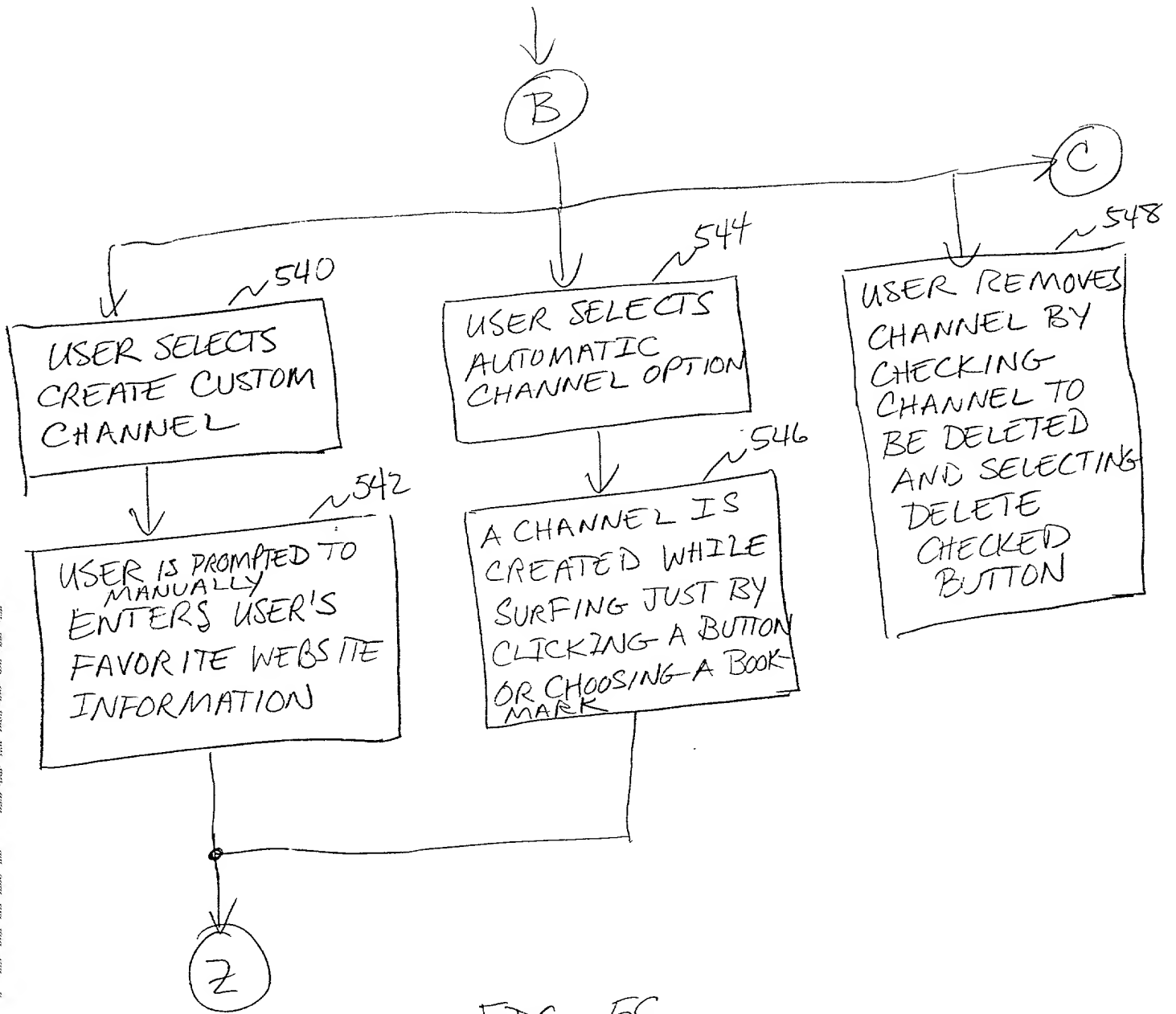


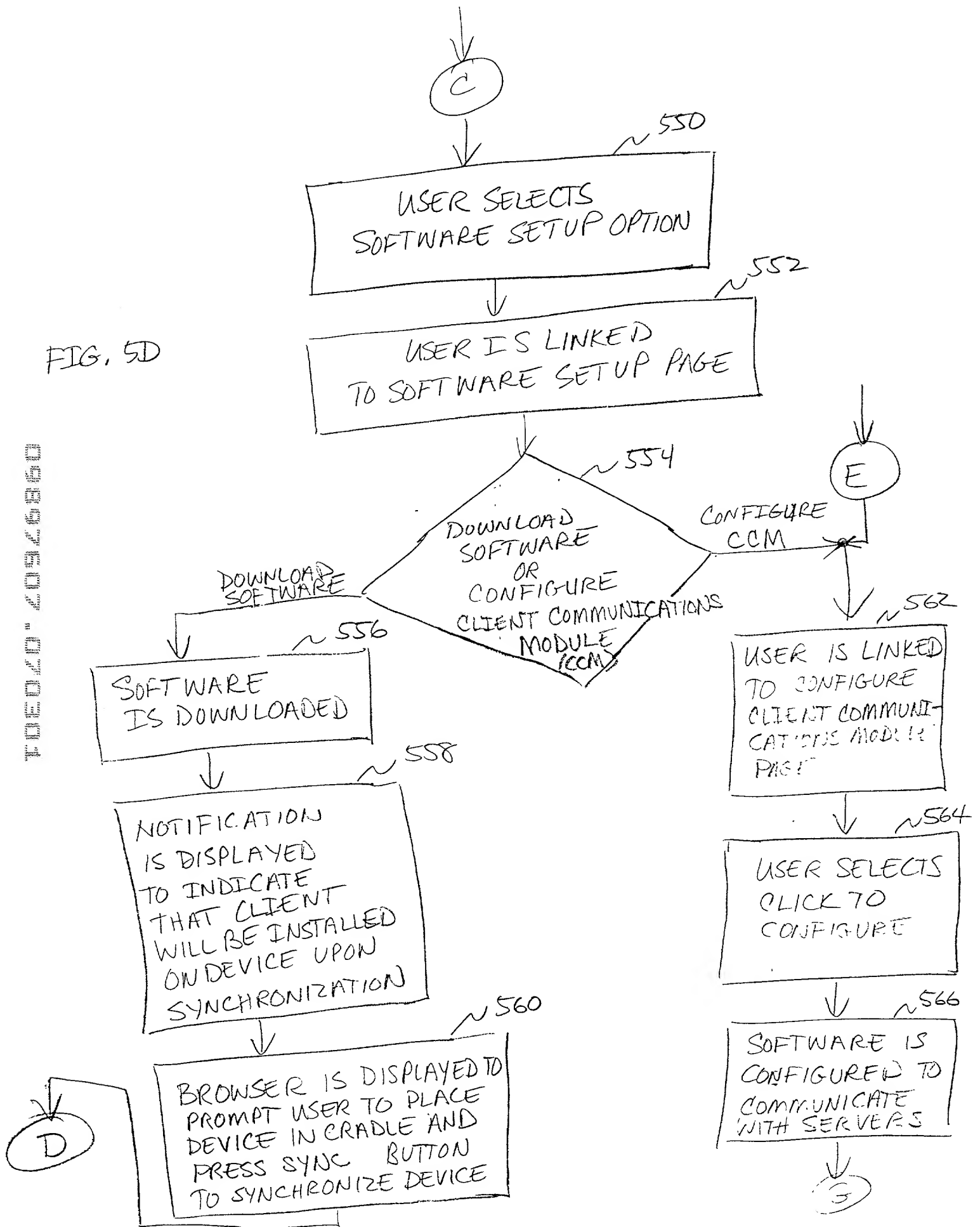
FIG. 5B



FIG. 5C



FIG, 5C



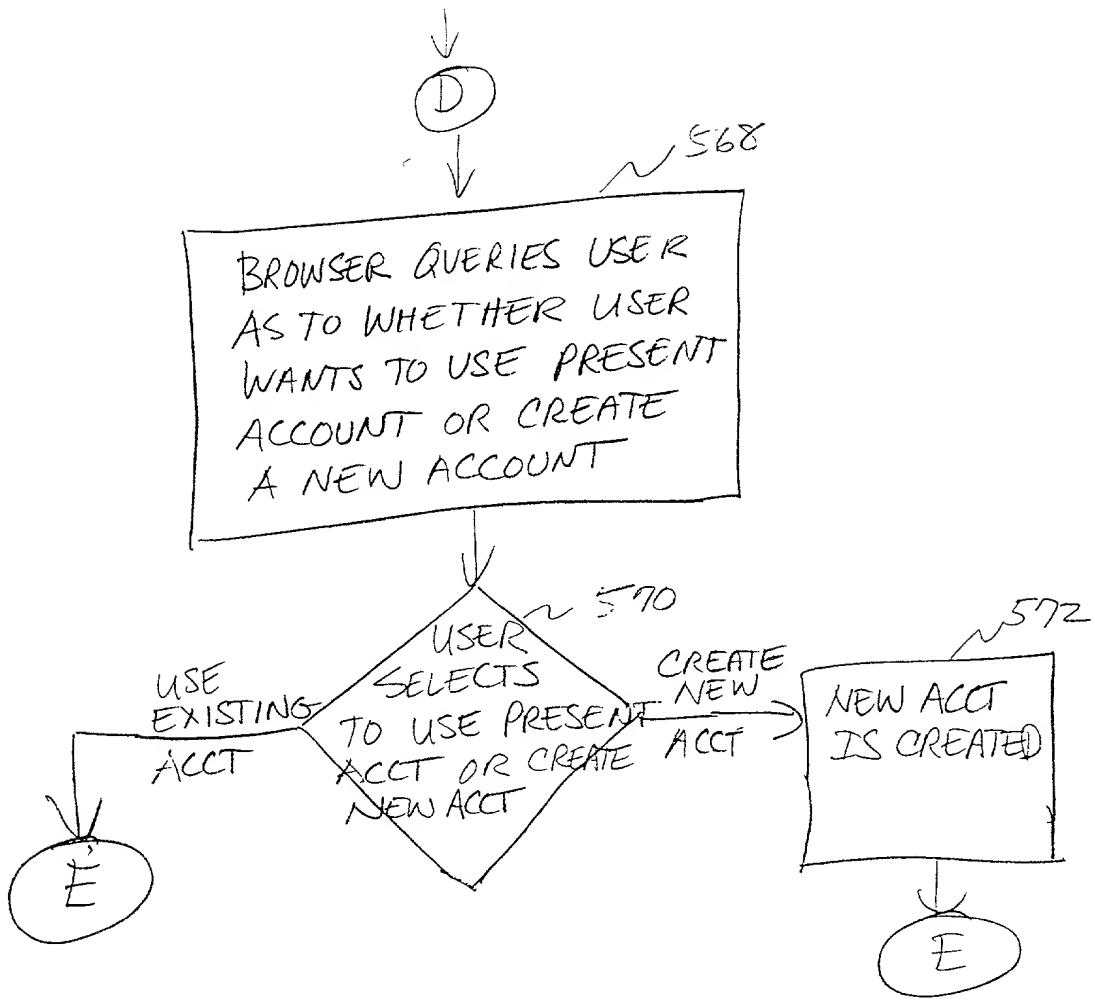


FIG. 5E

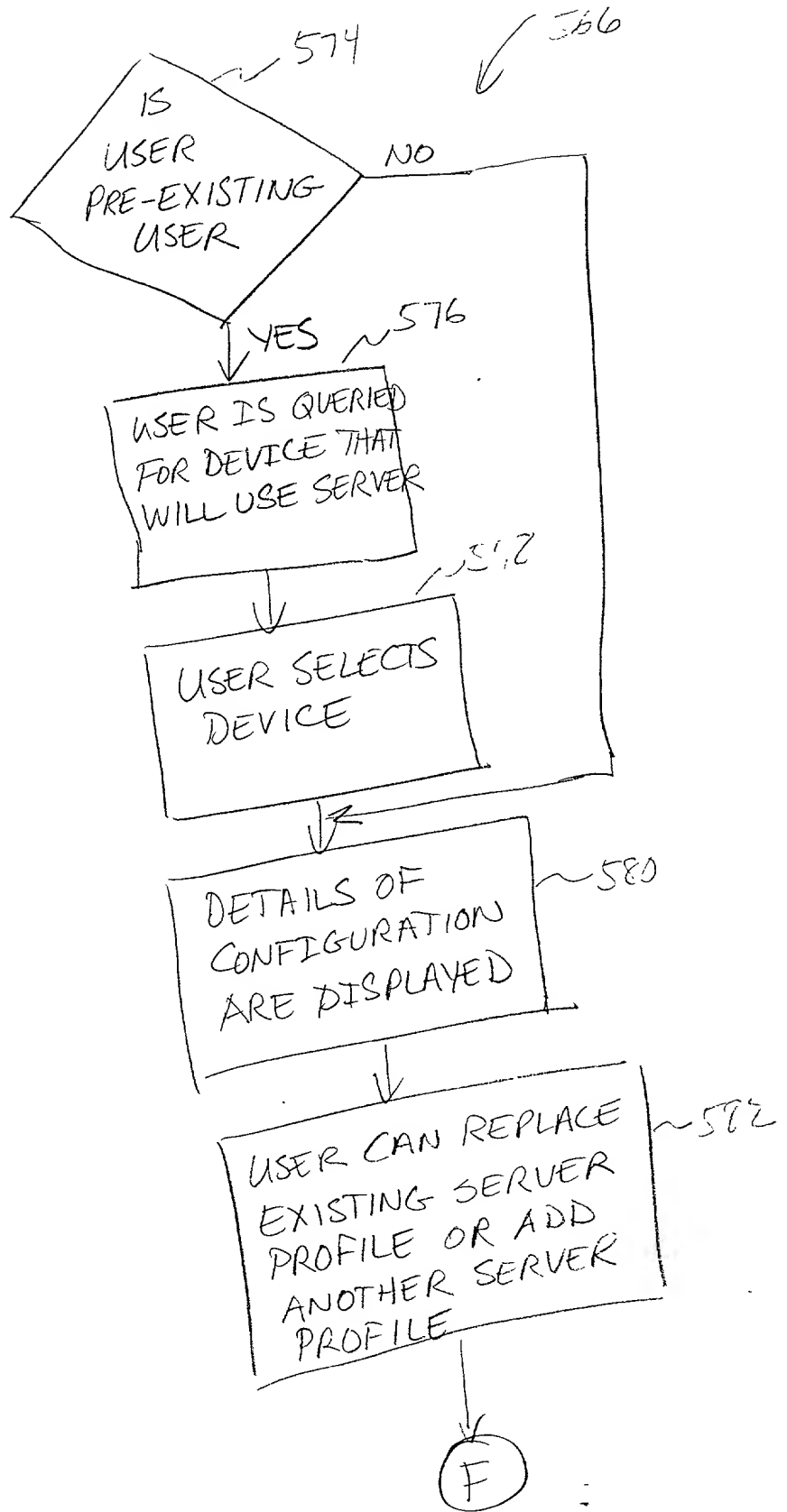


FIG. 5F.

09897607.070304

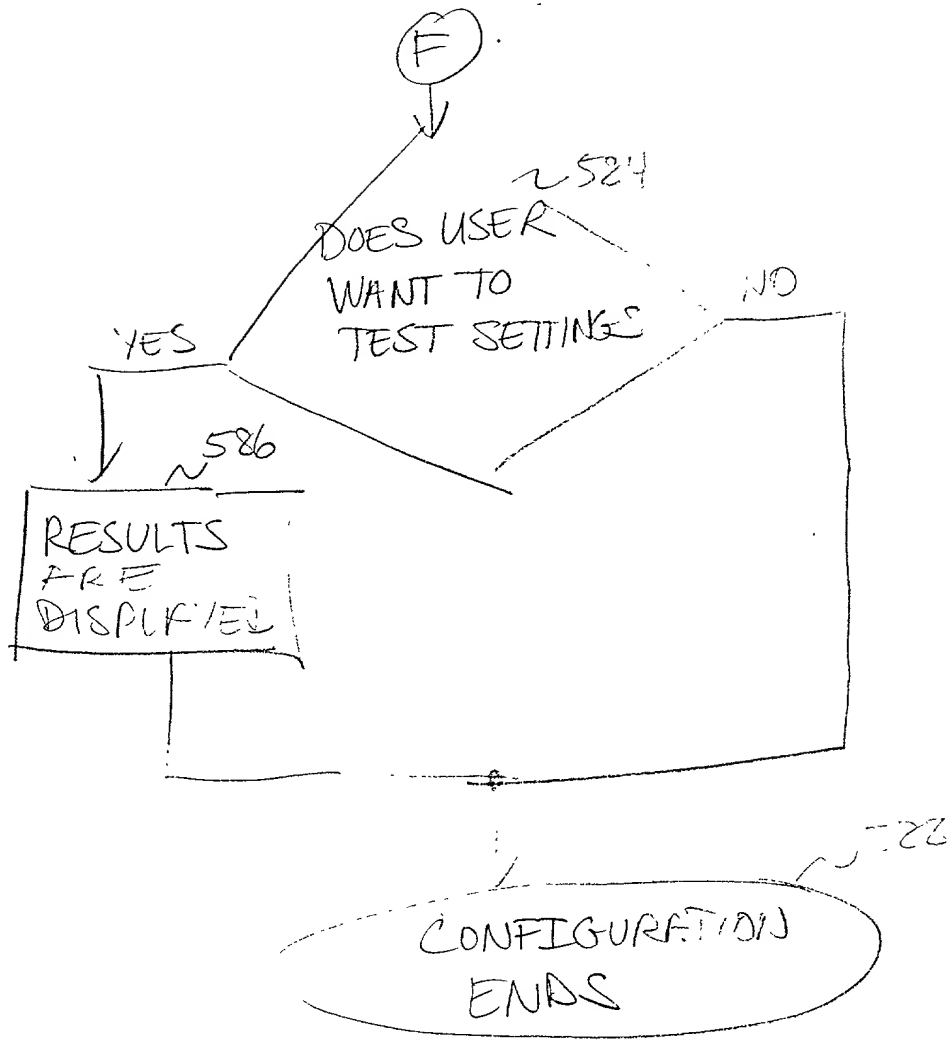


FIG 55

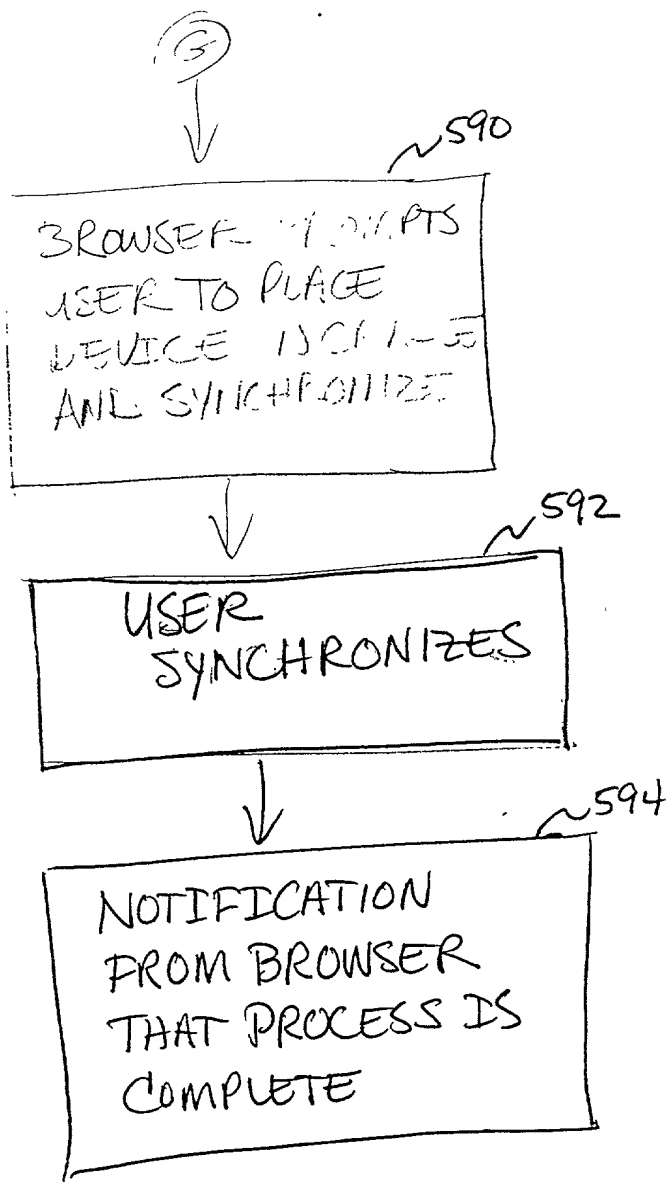
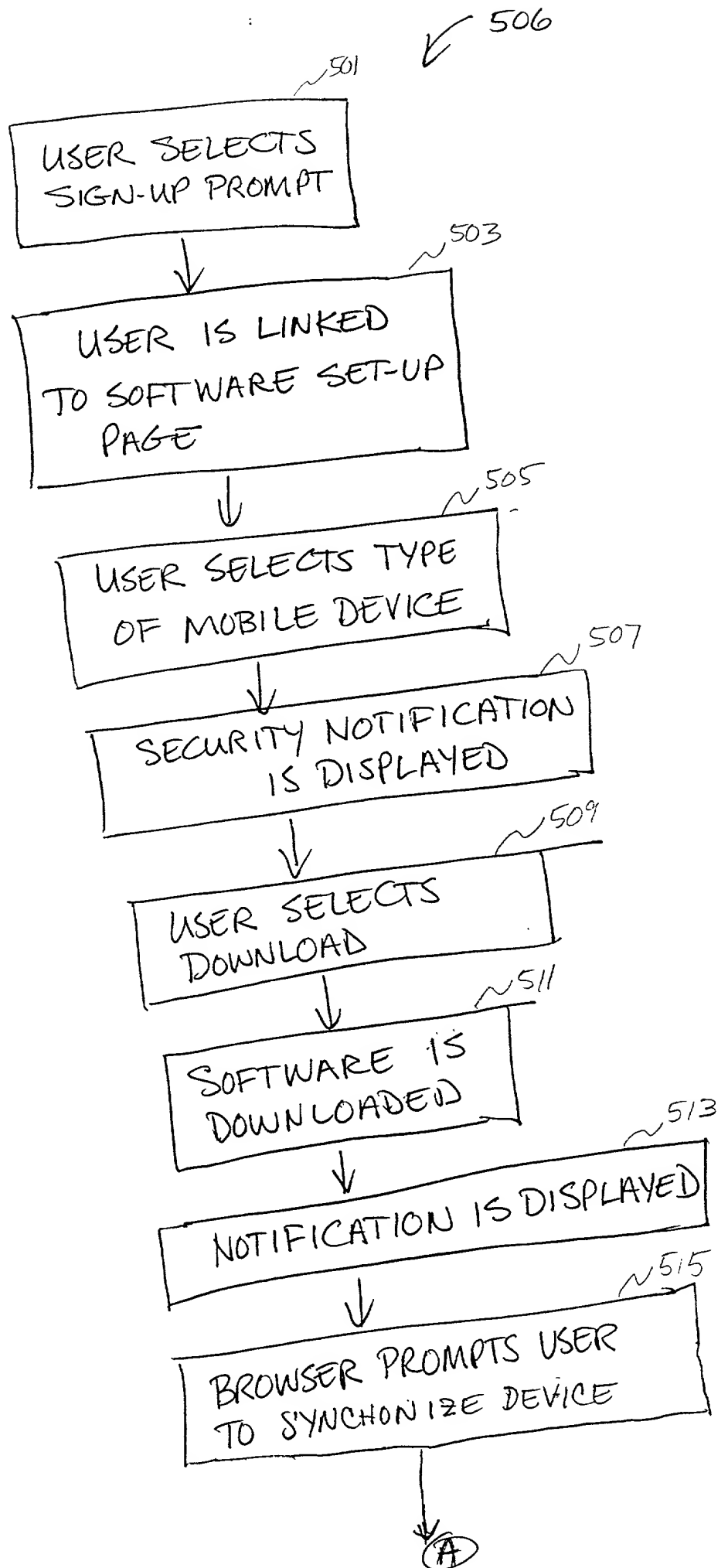


FIG. 5H

FIG. 5I



✓ S06 cont 4

09897607.070301

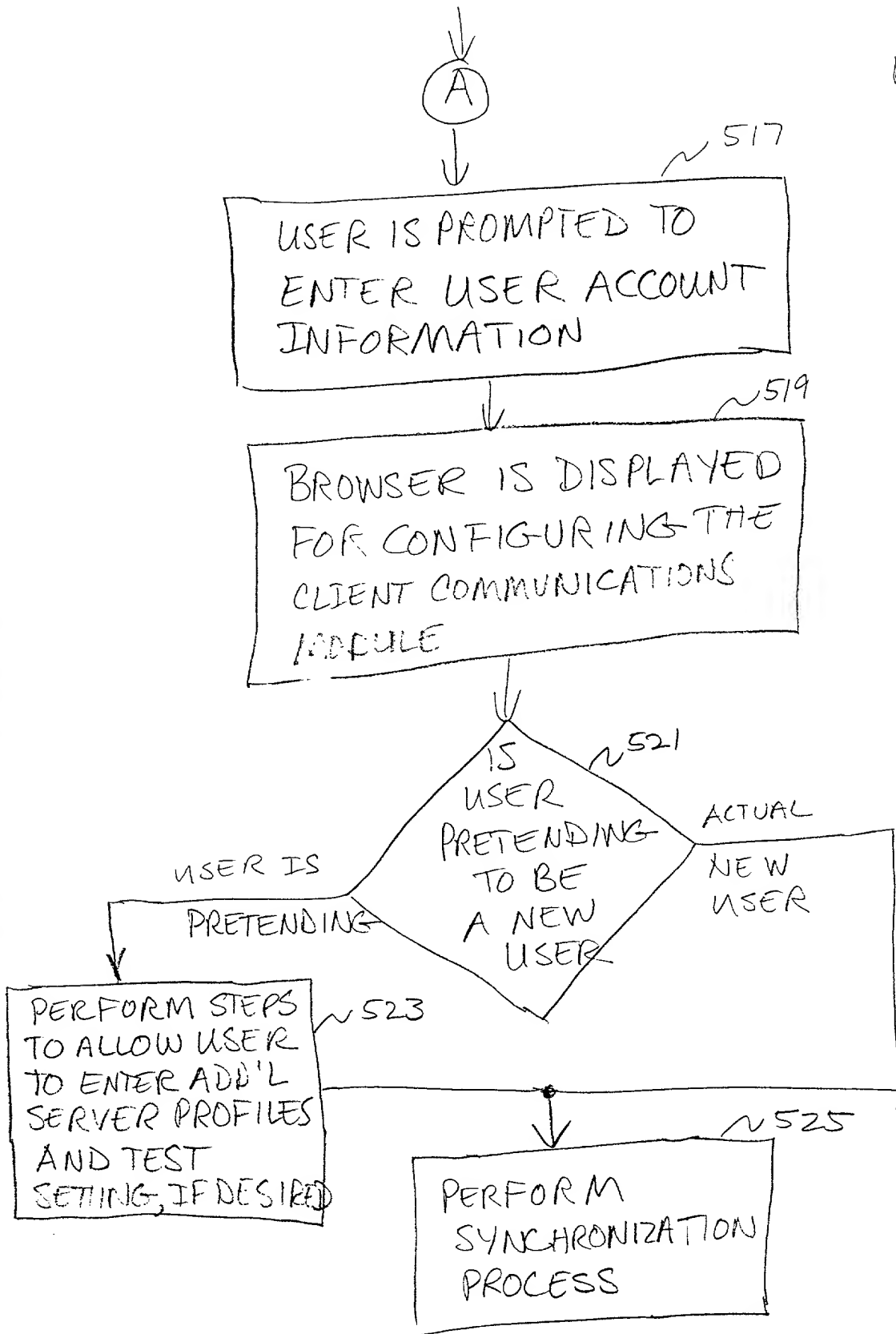


FIG. 5J



531

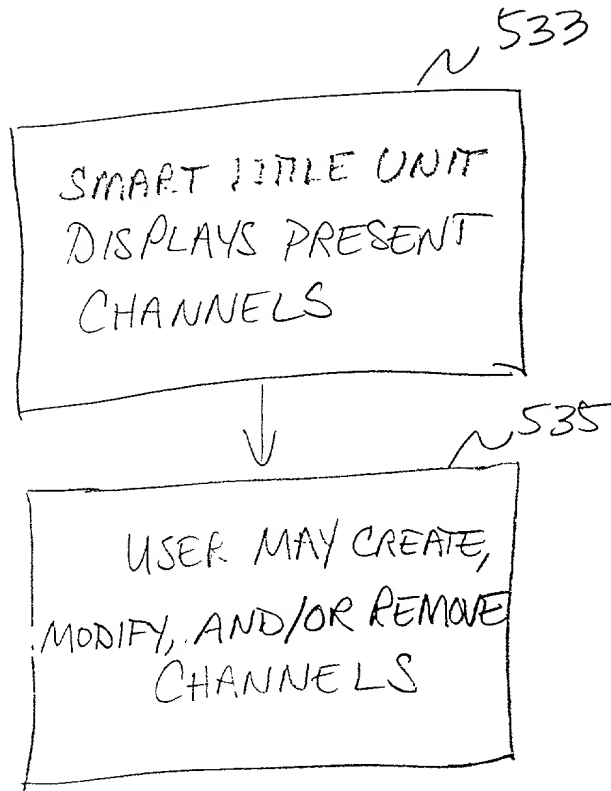


FIG. 5K

FIG. 5L

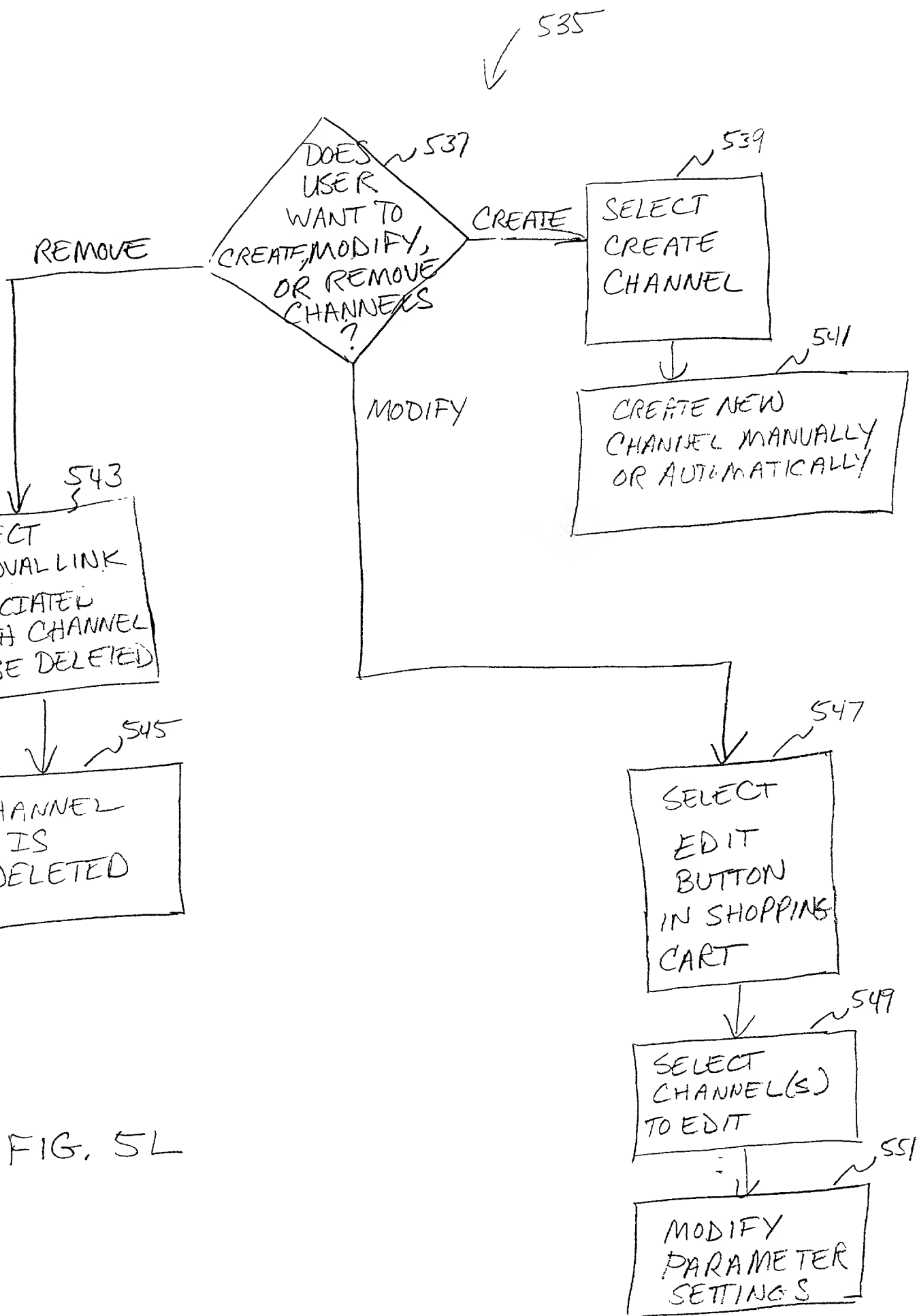


FIG. 5L

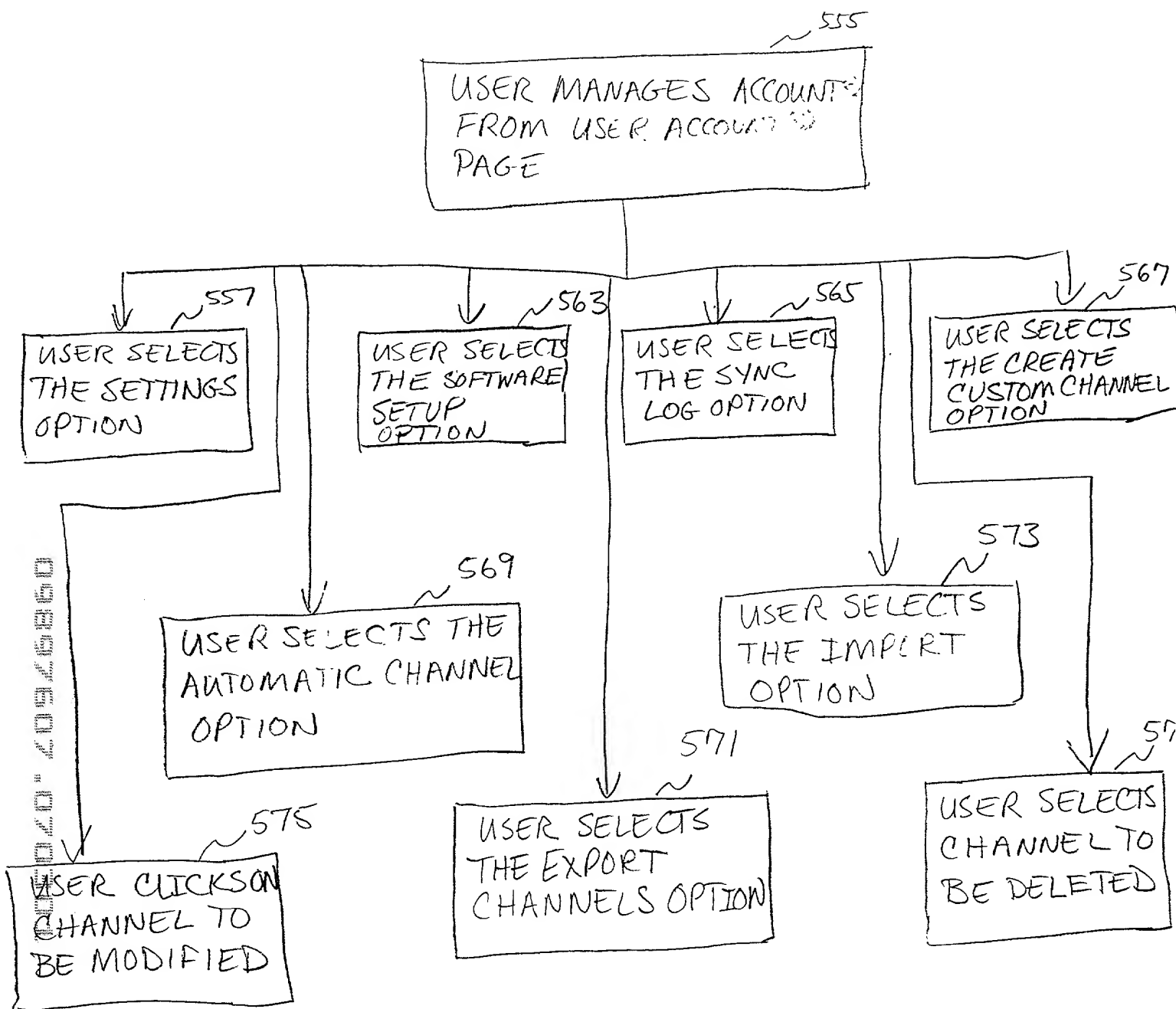




FIG. 5M

**Forms Manager**  

- ☐ 2:11p Maintenance Log success
- ☐ 2:12p Maintenance Log success
- ☐ 2:15p Service Request pending

---

FIG. 6

**Stock Smart**

Home

Monitor List

Up to 10 Tickers

msft orcl

Separate by Spaces

Update

Wednesday, MAY 05, 1999 05:53PM

Copyright 1996-1999 Stock Smart

all rights reserved

FIG. 7

File Edit Go Tools

**Channel Manager**

<input type="checkbox"/> My Sales Forms	1K
<input type="checkbox"/> Sales Demo	30K
<input type="checkbox"/> Sales Force Automation Forms	40K
<input type="checkbox"/> Survey	90K

Select All Clear

The Clear button will delete the selected channels from the device. These channels will come back the next time you sync.

Start 4:25p

FIG. 8

**AvantGo Options** OK X

Browser Online

☒ Show Images

☒ Show Detailed Find Results

☐ Always Show Open Page Window

FIG. 9

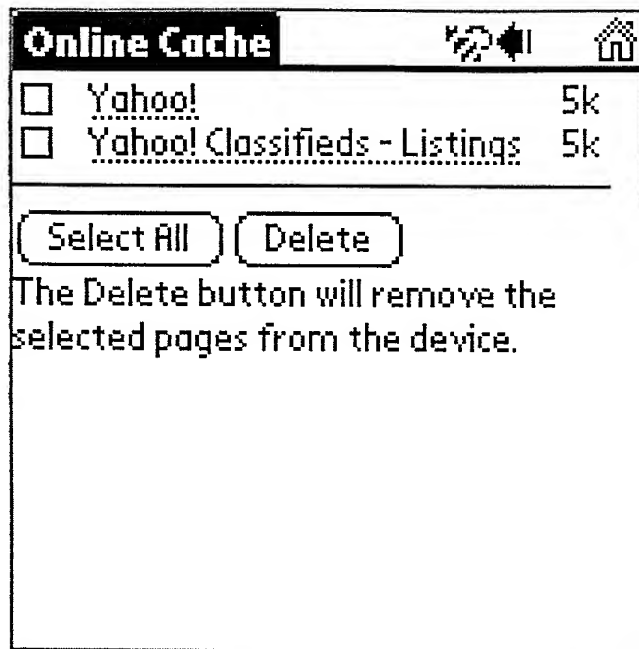


FIG. 10

FIG. 11

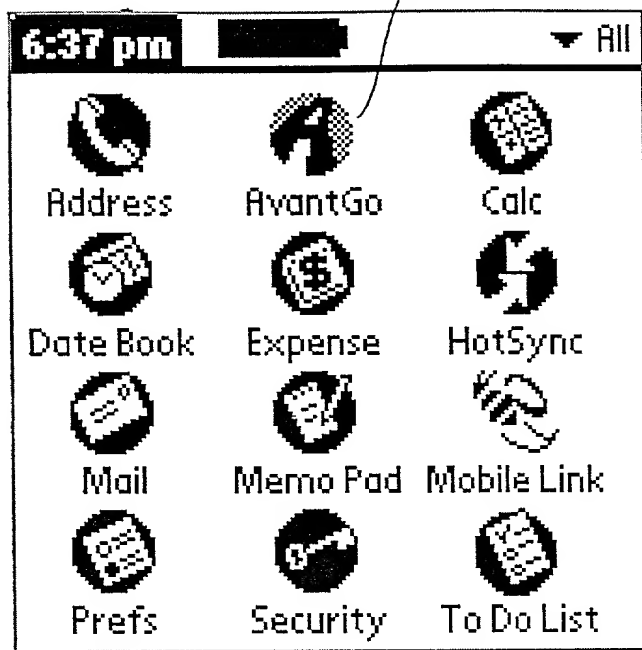


FIG. 11



FIG. 12



Enter text to  
search for here.

**AvantGo Find**

Find: movies

es

Choose in current  
page or in all  
pages here.

FIG. 13

**AvantGo**  AvantGo

**PERSONAL CHANNELS** — 1402

My Sales Forms

**Sales Information** — 1404

Sales Demo

Sales Force Automation Forms

Survey

☐ manage forms

☐ change servers

☐ remove channels

FIG. 14



AvantGo opens, showing your channels.  
Tap a channel's name to display it.

Fig. 15

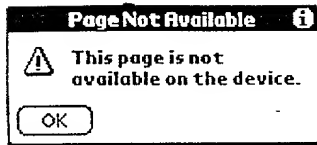


FIG. 16

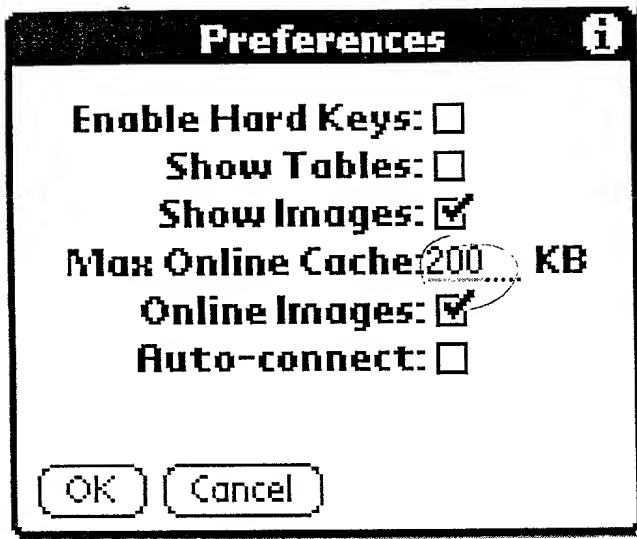
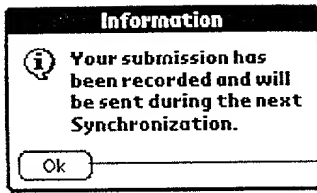


FIG. 17



Fig. 17



Click here to save the form and submit it the next time you sync.

FIG. 19

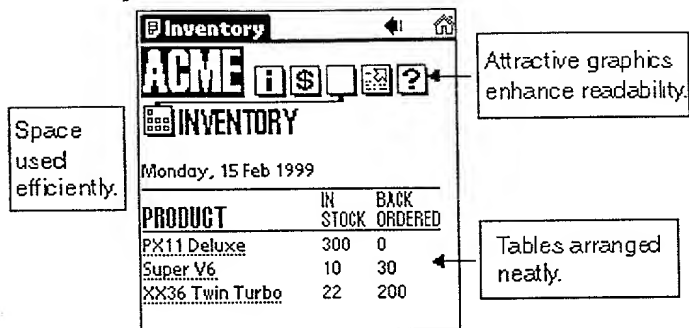


FIG. 20



Increase font

FIG. 21



Decrease font

FIG. 22



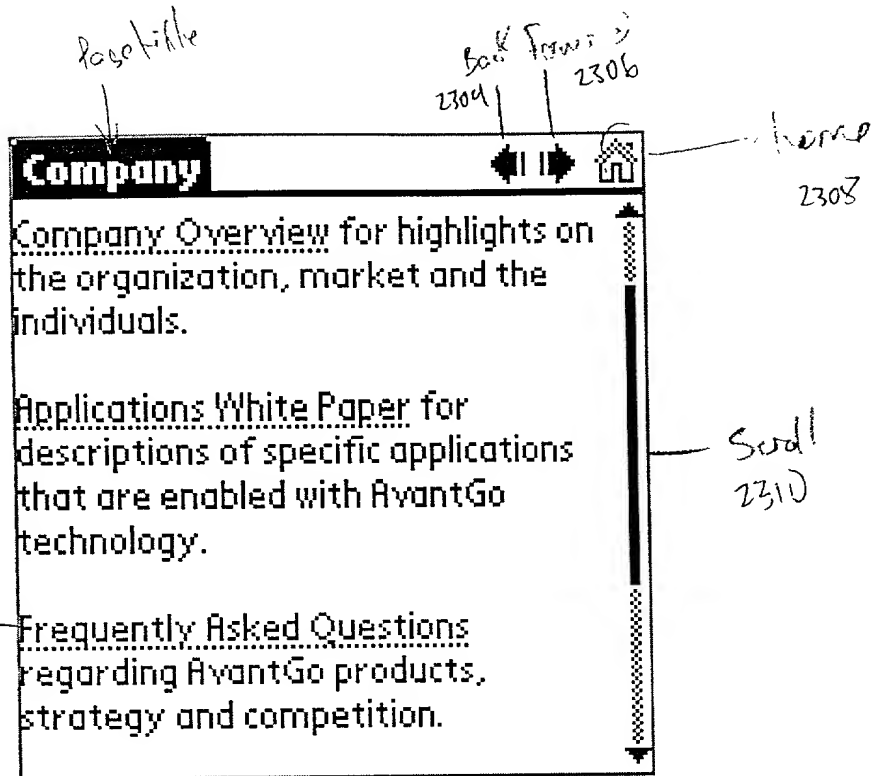


FIG. 23

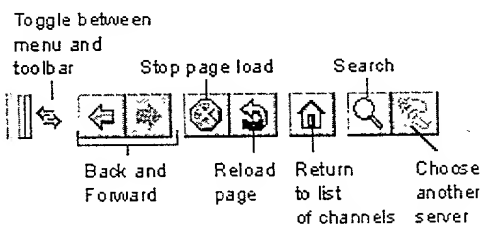


FIG. 24

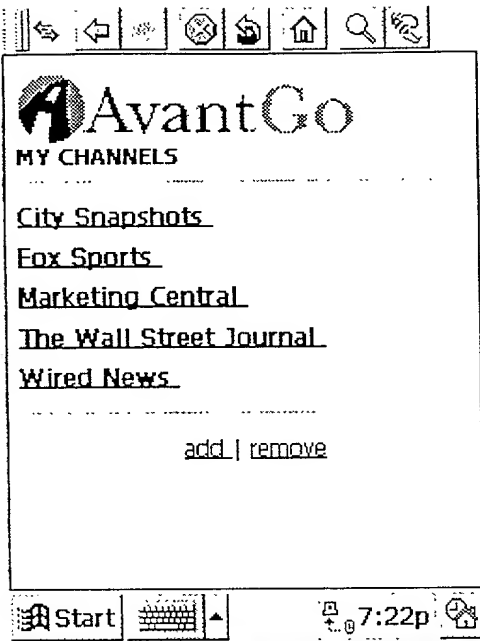


FIG. 25

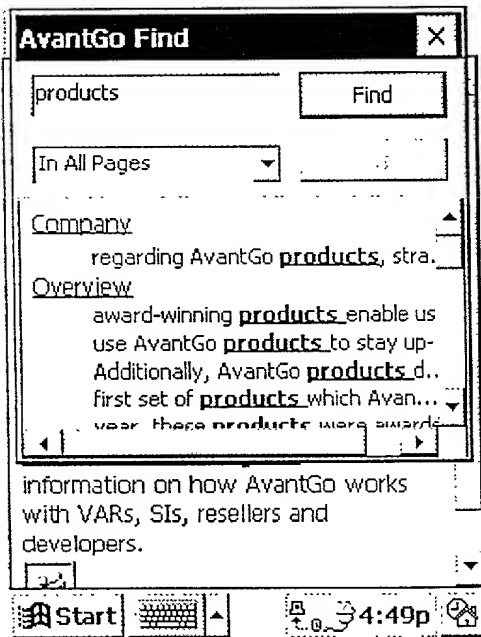


FIG. 26

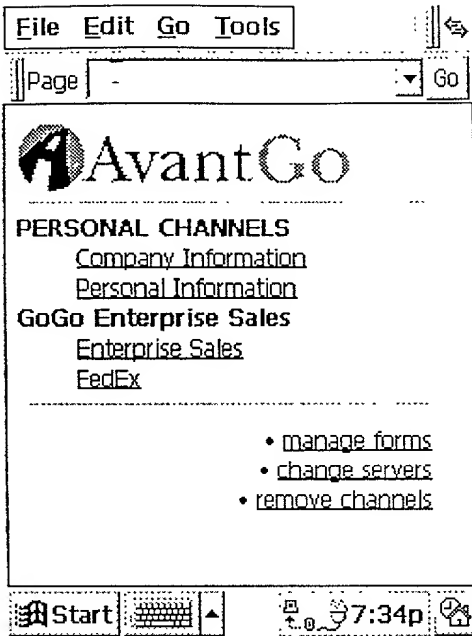


FIG. 27



# AvantGo Enterprise

Username

Password

☐ Remember me

Login

[Download Client Software](#)  
[View Client Guide](#)

Copyright ©1997-2000 AvantGo, Inc.  
Version 3.4.152 NT



Contains encryption software from  
RSA Data Security, Inc. Copyright ©  
1999-2000 RSA Data Security, Inc.  
All Rights Reserved.

FIG. 28

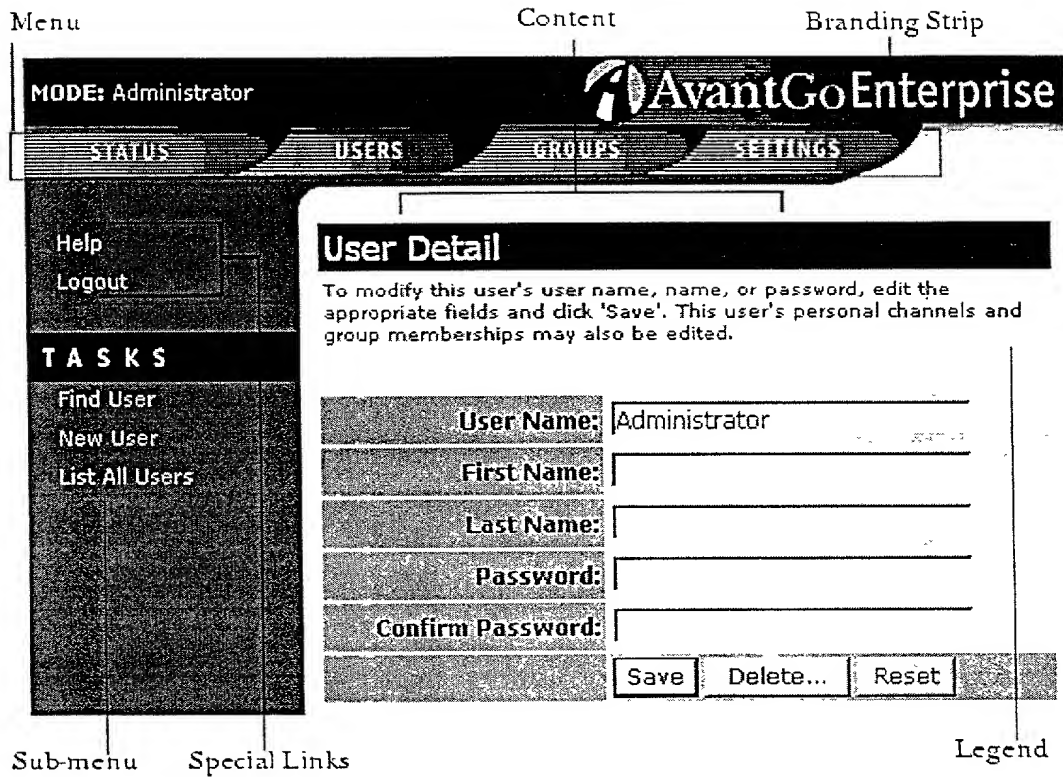


FIG. 29

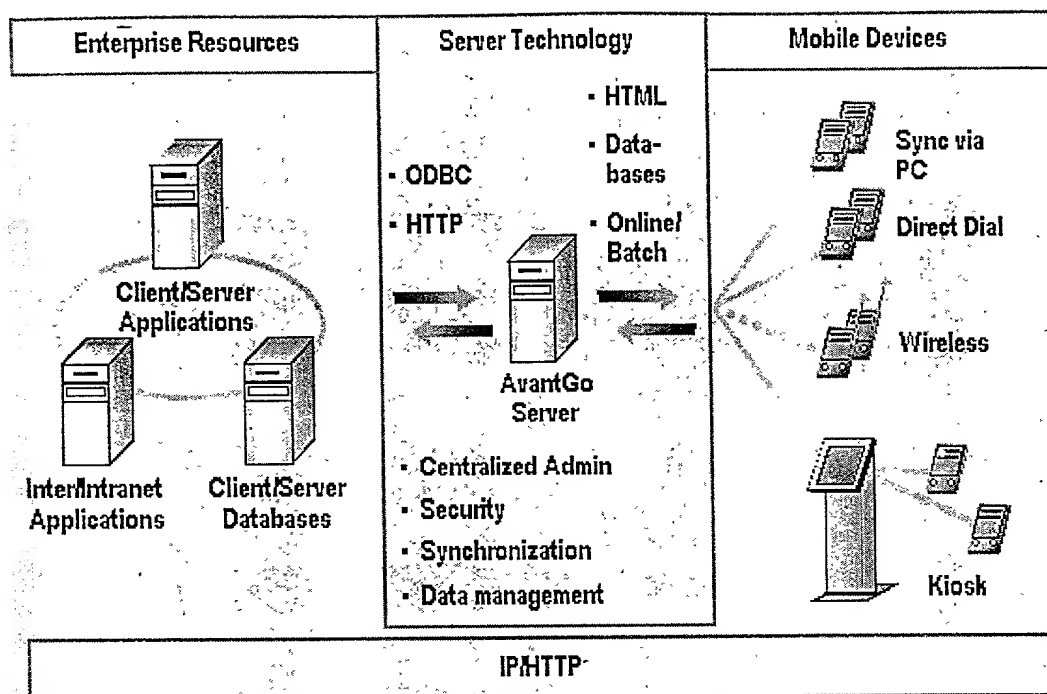


FIG. 30

109697607.070301

Enter: Tutorial      Click View to view/test the address of your channel.

Enter: http://  
syncdemo.avantgo.com/  
sfa\_3\_1/

### New Channel for User MobileUser

Title:	Untitled	
Location:	http://	<input type="button" value="View"/>
Channel Size Limit:	100	
Link Depth:	0	
Include Images:	<input type="checkbox"/>	
Follow Off-Site Links:	<input type="checkbox"/>	
Allow Binary Distribution:	<input type="checkbox"/>	
Hide from Users:	<input type="checkbox"/>	
Send URLs:	<input type="checkbox"/>	
Refresh:	<input type="radio"/> only once <input checked="" type="radio"/> every sync <input type="radio"/> hourly every <input type="text" value="0"/> hour(s) <input type="checkbox"/> only <input type="radio"/> daily	
<div>12:00 AM PM</div> <div>on days:</div> <div><input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Tuesday <input checked="" type="checkbox"/> Wednesday <input checked="" type="checkbox"/> Friday <input checked="" type="checkbox"/> Saturday <input checked="" type="checkbox"/> Sunday</div>		
<div><input type="button" value="Create"/> <input type="button" value="Reset"/> <input type="button" value="Cancel"/></div>		

Enter: 100

Enter: 3

Leave these fields unchecked.

Click the only once option.

Click the Create button.

FIG. 31

Refresh:

- ☒ on every sync
- ☐ every  hour(s)
- ☐ only once
- ☐ daily at :   on the following days:
  - ☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday
  - ☒ Friday ☒ Saturday ☒ Sunday

---

When finished, click the "Save Channel" button:

FIG. 32



## Update User Membership for Group Travel Itinerary

Manage this group's user memberships by selecting/deselecting the user check boxes and clicking update. To view information about a particular user, click the hyperlink name of the user.

User Name:	<input type="text"/>
First Name:	<input type="text"/>
Last Name:	<input type="text"/>
<input type="button" value="Find User"/>	

## Search Results

User Name	Name
<input type="checkbox"/> <a href="#">Joja</a>	John Jack
<input checked="" type="checkbox"/> <a href="#">Natalie</a>	Natalie Doe
<input type="checkbox"/> <a href="#">new</a>	new test
<input type="button" value="Update"/> <input type="button" value="Reset"/> <input type="button" value="Return to Group"/>	

FIG. 33

**Edit server profile**

**Server address**  

Hostname

Port

**Your account**  

Username

**Connection options**  

☒ Connect to this server.

☐ Refresh all content.

☒ Connect securely.

FIG. 34

[Help](#)  
[Logout](#)

## TASKS

[Find User](#)  
[New User](#)  
[List All Users](#)

## Modify Channels of Natalie

For more information or to modify or delete a specific channel, click on the title. To create a new personal channel, click the New Personal Channel link on the left.

Title	Total Size	Last Sync
Personal Channels		
Enterprise Intranet		
<a href="#">Federal Express</a>	0	Never Synced
<a href="#">GoGo Enterprise Sales</a>		
<a href="#">Enterprise Intranet for Sales</a>	7	Wed Oct 06, 1999 12:32:55
<a href="#">FedEx</a>	93	Wed Oct 06, 1999 12:32:55
<a href="#">Sales Force Automation Forms</a>	18	Wed Oct 06, 1999 12:32:55
Travel Itinerary		

Total: 118KB

[Create New Personal Channel](#)[Return to User](#)

## Recent Sync History

The three most recent synchronizations are logged below. More information can be found in the [Complete Sync History](#).

**[Wed Oct 06, 1999 12:32:44] (12 seconds)**

HTTP/1.1 404 File not found (404) - http://localhost/device/brand/avantgo/images/device/CE\_header.gif

**[Wed Oct 06, 1999 12:32:34] (0 seconds)**

Completely out of sync, resequencing...

**[Wed Oct 06, 1999 12:31:35] (13 seconds)**

HTTP/1.1 404 File not found (404) - http://localhost/device/brand/avantgo/images/device/CE\_header.gif

[Clear Channel Cache](#)

During synchronization, the server updates existing channels and pages with modifications only. Clearing the channel cache will force all the channels and pages to be transferred to the device during the next synchronization.

[Clear Cookies](#)

Cookies containing profile information about you are placed in your user profile by the sites that you visit. Clearing the cookies database may remove personalized information stored on your device by the web servers that you visit. Clearing cookies will disable the "remember me" feature from the login prompt.

[Clear Authentication Info](#)

Some web servers require you to supply a user name and password to access the site. The server caches this authentication information and supplies it to the web server during synchronization. Clearing the authentication database will usually require you to reenter your user name and password the next time you visit a site that requires authentication.

FIG. 35

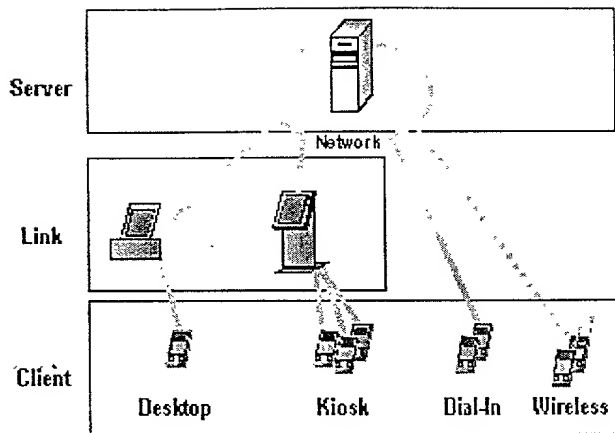


FIG. 3b

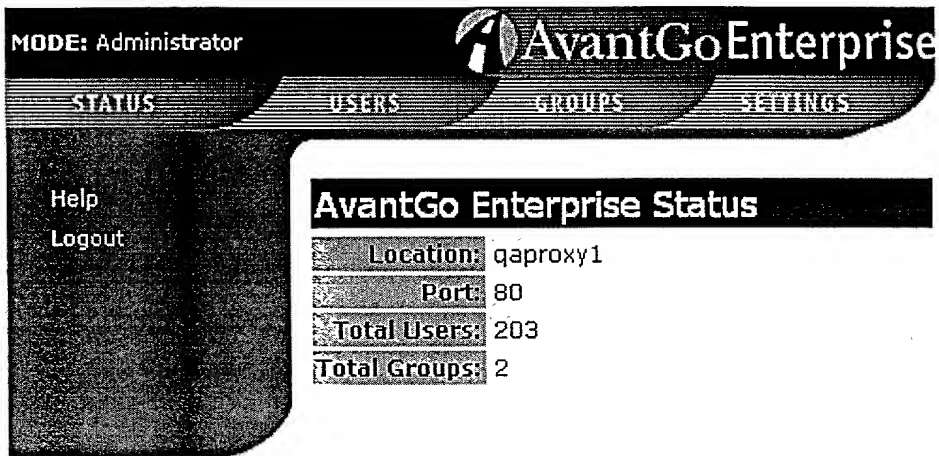


FIG. 37

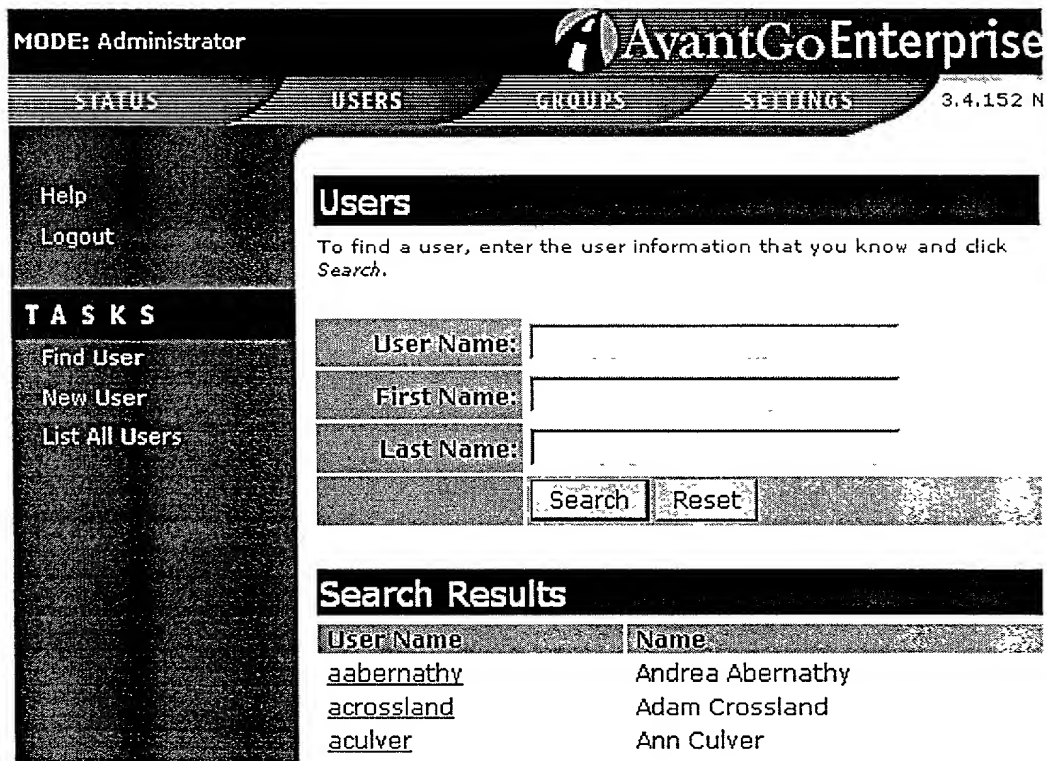


FIG. 38

FOR 20" 20926860

MODE: Administrator

AvantGo Enterprise 3.4.152 NT

STATUS USERS GROUPS SETTINGS

Help  
Logout

**T A S K S**  
Find User  
New User  
List All Users

### User Detail

To modify this user's user name, name, or password, edit the appropriate fields and click 'Save'. This user's personal channels and group memberships may also be edited.

### Adam Crossland

User Name:	Jacrossland
First Name:	Adam
Last Name:	Crossland
Password:	
Confirm Password:	

Save Delete... Reset

FIG. 39

09897607-070301

STATUS USERS **GROUPS** SETTINGS 3.4.152 NT

Help  
Logout

**TASKS**  
List All Groups  
New Group

### Modify Group test group 1

Modify this group's name and description by editing the fields and clicking Save. To manage this group's users or channels, click 'Add/Remove Users'. To create a channel for this group, click 'New Group Channel'. To edit this group's channel, click on its name.

Name:

Description:

### Group Members

User Name	Name
<a href="#">drice</a>	David Rice
<a href="#">dylan</a>	Dylan McDanniel
<a href="#">rafael</a>	Rafael Weinstein
<a href="#">robert</a>	Robert Otani

### Group Channels

FIG. 40

MODE: Administrator

STATUS USERS **GROUPS** SETTINGS 3.4.152 NT

Help  
Logout

**TASKS**  
List All Groups  
New Group

### Groups

Modify or view a group by clicking on its name.

Group Name	Description
<a href="#">asdf</a>	
<a href="#">test group 1</a>	test

FIG. 41

MODE: Administrator

AvantGo Enterprise

STATUS

USERS

GROUPS

SETTINGS

3.4.152 N

Help  
Logout

#### T A S K S

Change Admin  
Password  
PalmOS Download  
WinCE Download

### Admin Settings

Old Password:

New Password:

Confirm New Password:

Save

Reset

FIG. 42


FIG. 42

Windows - Microsoft Internet Explorer  
Address [nnel\\_properties.html?cha\\_id=2928246](#) Go

**CHANNEL PROPERTIES** [BACK TO CHANNELS](#)

[My Channels](#)  
[Settings](#)  
[Software Setup](#)  
[Sync Log](#)

**CHANNEL TITLE**

 Fox Sports

**CHANNEL SIZE**

Maximum Channel Size:  k  
Link Depth:   
Include Images: ☒ Yes ☐ No  
Follow Off-Site Links: ☒ Yes ☐ No

**CHANNEL REFRESH**

REFRESH:  
☒ on every sync  
☐ every  hour(s)  
☐ only once  
☐ daily at   AM on the following days:  
☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday  
☒ Friday ☒ Saturday ☒ Sunday

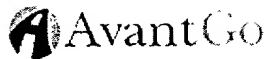
[SAVE CHANNEL CHANGES](#)

Internet

FIG. 43

09697607.0004  
T0E070"20926860





Welcome, dkoehn68

[Log out](#)

MY ACCOUNT

[My Channels](#)

[Settings](#)

[Software Setup](#)

[Sync Log](#)

**AUTOCHANNEL™**

[BACK TO CHANNELS](#)

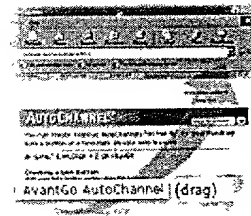
You can create AvantGo AutoChannels "on the fly" for your handheld from a button or a bookmark on your web browser.

INTERNET EXPLORER 4.0 OR HIGHER

#### Creating a Link Button

With your links toolbar visible, drag the AvantGo AutoChannel™ link below to the toolbar. Clicking on the button while browsing a website will let you add that website to your handheld device.

Drag this link: [AvantGo AutoChannel](#)



#### Creating a Bookmark

Right-click on AvantGo AutoChannel™ link below and select "Add to Favorites...". Choosing this in your favorites will let you add the website you are browsing as an AvantGo channel on your handheld.

Right-click this link: [AvantGo AutoChannel](#)

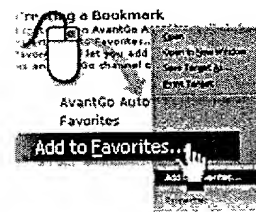


FIG. 44

06997607-070304

10602026850

AvantGo - Microsoft Internet Explorer

Address: https://avantgo.com/mydevice/creat Go

MY ACCOUNT

[My Channels](#)

[Settings](#)

[Software Setup](#)

[Sync Log](#)

**AUTOCHANNEL (TM)**

Take your favorite Websites with you  
You can create AvantGo AutoChannels on the fly for your handheld from a button or a bookmark on your web browser

## CREATE CHANNEL

[BACK TO CHANNELS](#)

**CHANNEL TITLE**

Title:

Location (URL):  [View](#)

**CHANNEL SIZE**

Maximum Channel Size:  k

Link Depth:

Include Images: ☐ Yes ☒ No

Follow Off-Site Links: ☐ Yes ☒ No

**CHANNEL REFRESH**

REFRESH:

☒ on every sync

☐ every  hour(s)

☐ only once

☐ daily at   AM on the following days:

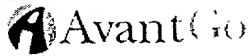
☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday

☒ Friday ☒ Saturday ☒ Sunday

[SAVE CHANNEL](#)

Internet

FIG. 45



## SEARCH CHANNELS

Look For:

GO

## CHANNEL CATEGORIES

new channels

Business [65]

City/Regional [122]

Entertainment [111]

Lifestyle [57]

News [64]

SciTech [11]

Sports [13]

Travel [41]

Weather [29]

Wireless [21]

## FEATURED CHANNELS

**FOX SPORTS**

UP-TO-THE-MINUTE SCORES, STATS, STORIES AND COMMENTARY.

**salon.com**

A DISTINCTIVE VOICE ON NEWS, POLITICS AND OPINION.

## COOL CHANNELS (AVANTGO STAFF FAVORITES)

Autobytel

Buy your next car or keep up to date with your current car's maintenance - all from your handheld.

Hollywood.com

Have movie listings for your zip code right at your fingertips.

Restaurant Row

Find a great restaurant in your area and even make reservations wirelessly.

MyDocsOnline

Sync your desktop documents to your handheld or wirelessly email them to friends or colleagues.

Welcome, dkoeHN68

[Log out](#)

**MY ACCOUNT** [EDIT](#) [➔](#)

[Fox Sports](#)

[Hoover's IPO Update](#)

[The Wall Street Journal](#)

[The Weather Channel](#)

[Upside Today](#)

[Wired News](#)

[Yahoo!](#)

[CREATE CHANNEL](#)

10E020 20926860

FILE 46

FIG. 47

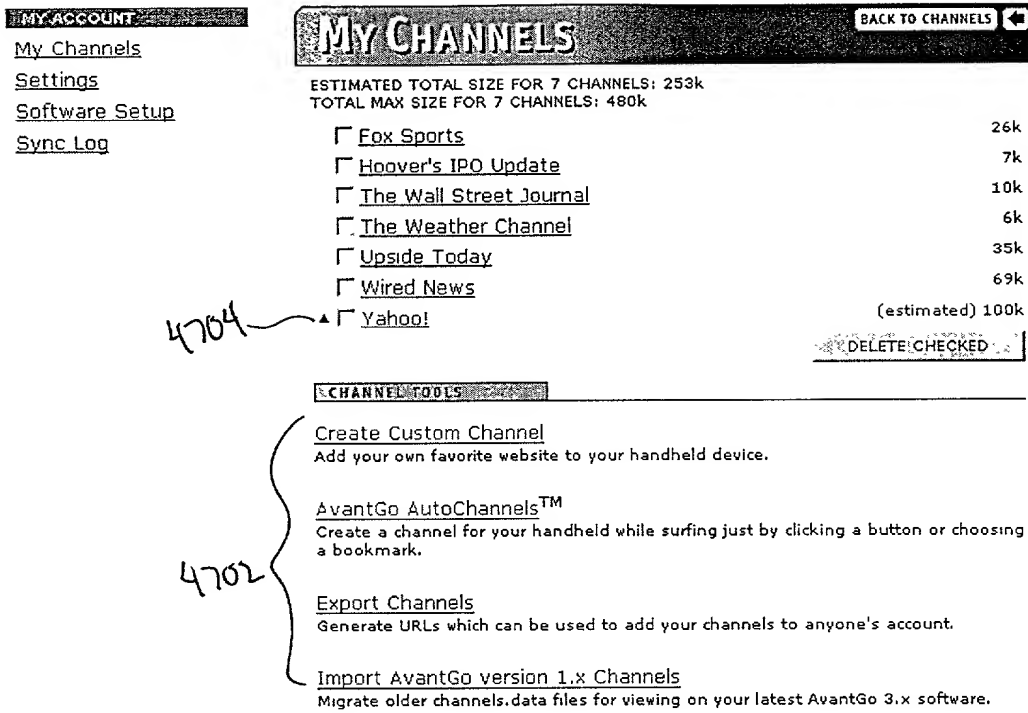


FIG. 47

MY ACCOUNT

[My Channels](#)

[Settings](#)

[Software Setup](#)

[Sync Log](#)

## ACCOUNT SETTINGS

[BACK TO CHANNELS](#)

### CHANGE PASSWORD

You will be asked to update changes to your device from this website.  
If you've forgotten your password, you can [request a password reset](#).

Old Password:

New password:

Confirm password:

### CHANGE EMAIL ADDRESS

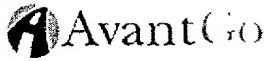
This is where password reset messages will be sent if you forget your username or password.

Password:

New email address:

FIG. 48

05897607-070304



Welcome, dkoeHN68

[Log out](#)

MY ACCOUNT

[My Channels](#)

[Settings](#)

[Software Setup](#)

[Sync Log](#)

## SOFTWARE SETUP

[BACK TO CHANNELS](#)

- ▶ [Download AvantGo Palm OS Client](#) (Windows)
- ▶ [Download AvantGo Windows\(R\) CE Client](#) (Windows)
- ▶ [Download AvantGo Connect™](#) (Macintosh)
- ▶ [Configure Mobile Application Link](#)

### To check your AvantGo Client version:

Tap *Tools* > *About AvantGo* on CE

or

*Menu* > *Options* > *About AvantGo* on Palm Devices.

The About AvantGo panel appears. On the bottom left is your version number.

[Update](#)

FIG. 49

FIG. 49

09897607-070301

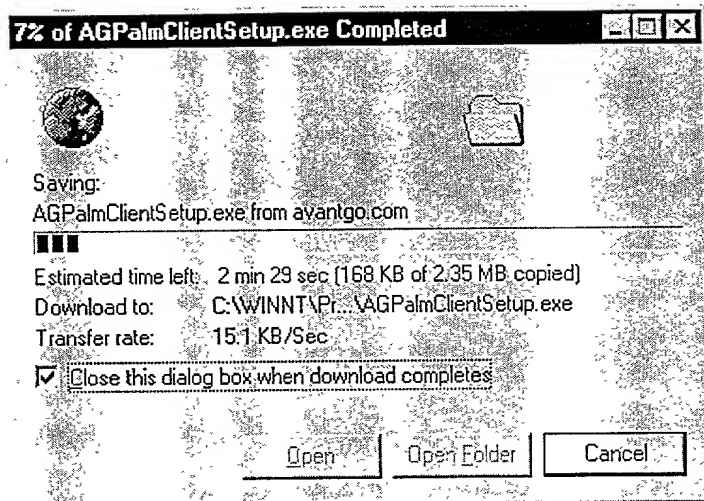


FIG. 50

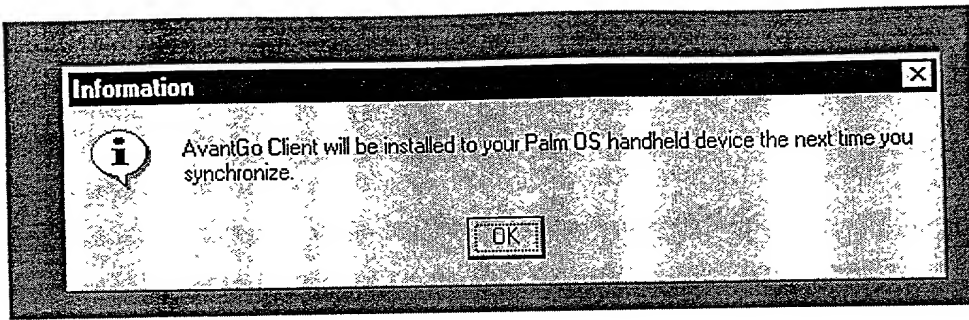
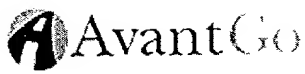


FIG. 51





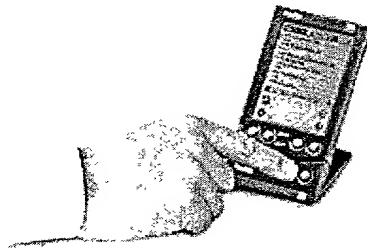
#### SETUP CHECKLIST

- DOWNLOAD
- ▶ INSTALL
- SYNCHRONIZE
- CREATE ACCOUNT
- CONFIGURE
- SETUP DEVICE

## SYNCHRONIZE

Place your device in its cradle and press the HotSync button.

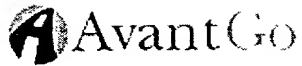
When you synchronize, AvantGo 3.x will be installed on your device. After synchronization is complete, click the "Next" button at the bottom of the page.



**NEXT>>**

FIG. 52





#### SETUP CHECKLIST

- DOWNLOAD
- INSTALL
- SYNCHRONIZE
- CREATE ACCOUNT
- CONFIGURE
- SYNCHRONIZE

### CONFIGURE MOBILE LINK

Click the link below to configure Mobile Link™

By clicking below, you will ensure your AvantGo 3.x software is communicating properly with AvantGo's servers.

CLICK HERE  
TO CONFIGURE

5402

NEXT >>

FIG. 54

09697607-070304  
T0E020-20326860

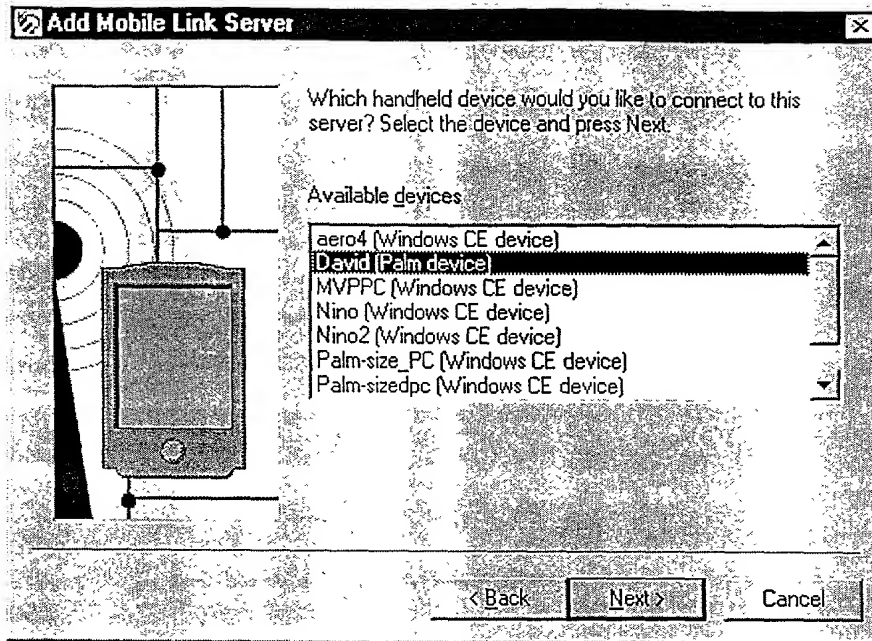


FIG. 55

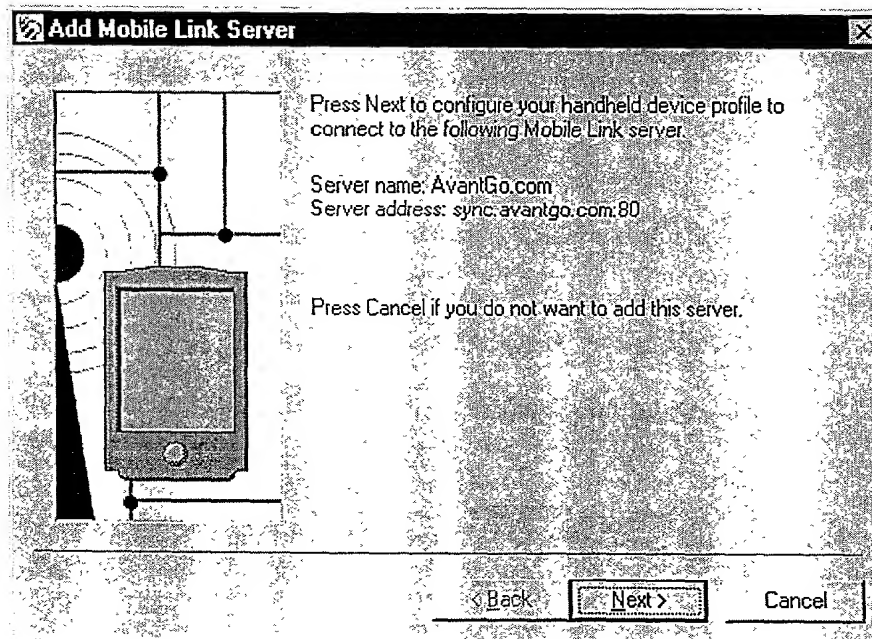


FIG. 56

FI 6.57

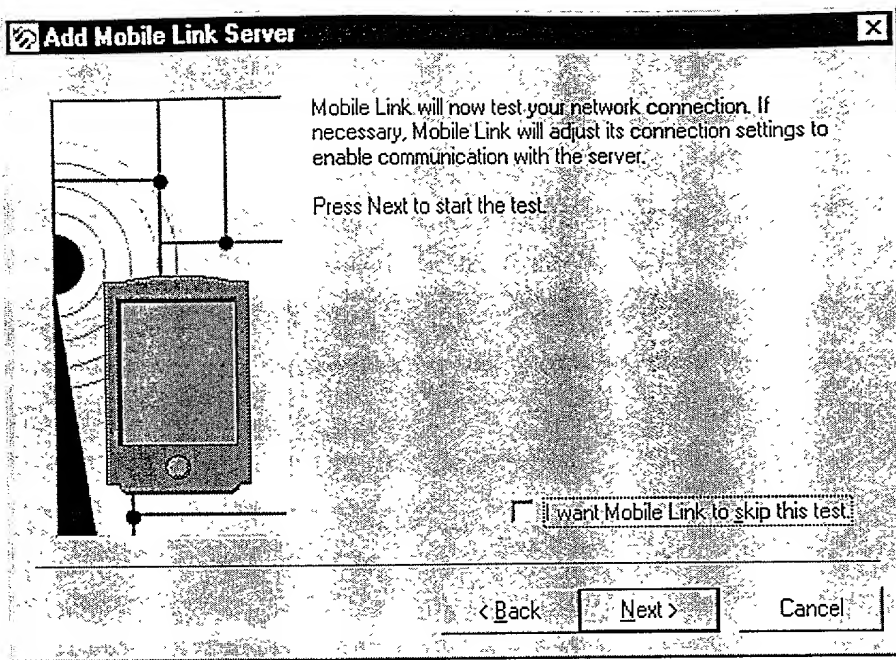


FIG. 58

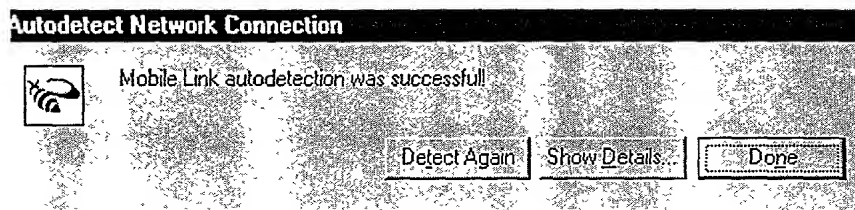


FIG. 59

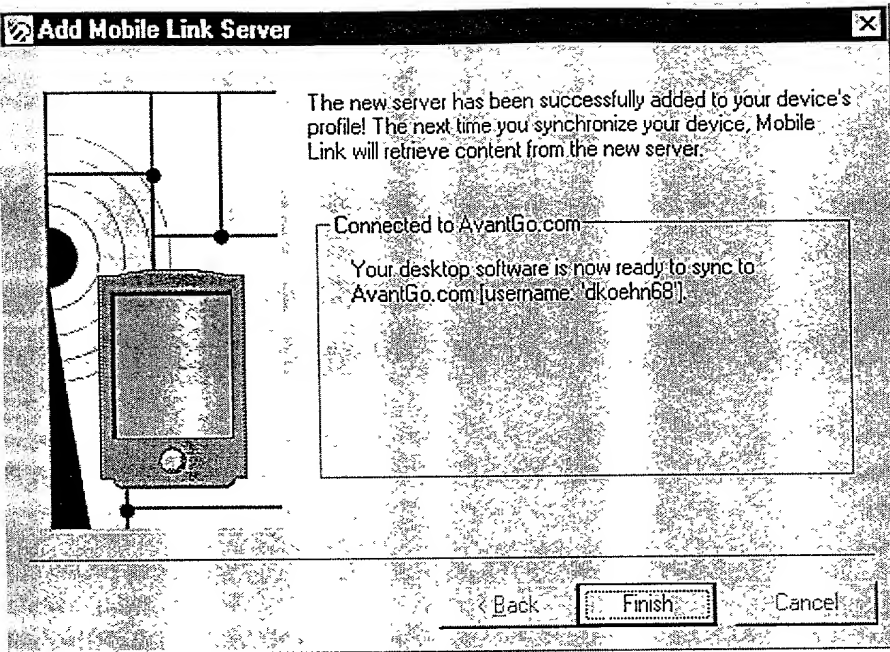
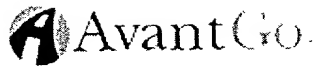


FIG. 60





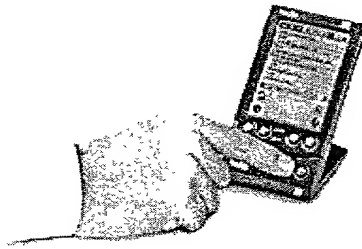
#### SETUP CHECKLIST

- 1. DOWNLOAD
- 2. INSTALL
- 3. SYNCHRONIZE
- 4. CREATE ACCOUNT
- 5. CONFIGURE
- ▶ SYNCHRONIZE

## SYNCHRONIZE

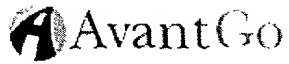
Place your device in its cradle and press the HotSync button

When you synchronize, your AvantGo 3.x software will connect to the Avantgo servers for the first time. After synchronization is complete, click the "Next" button at the bottom of the page.



**NEXT>>**

FIG. 61



#### SETUP CHECKLIST

- DOWNLOAD
- INSTALL
- SYNCHRONIZE
- CREATE ACCOUNT
- CONFIGURE
- SYNCHRONIZE

## CONGRATULATIONS!

You are now an AvantGo user

Pick up your device, click on the "applications" button and select AvantGo to begin navigating channels. Use the links below to begin navigating AvantGo.

### CHANNELS

Choose from 1000s of exciting channels from leading providers

### ACCOUNT

View and edit your personalized account settings

**FINISH >>**

FIG. 62

6302

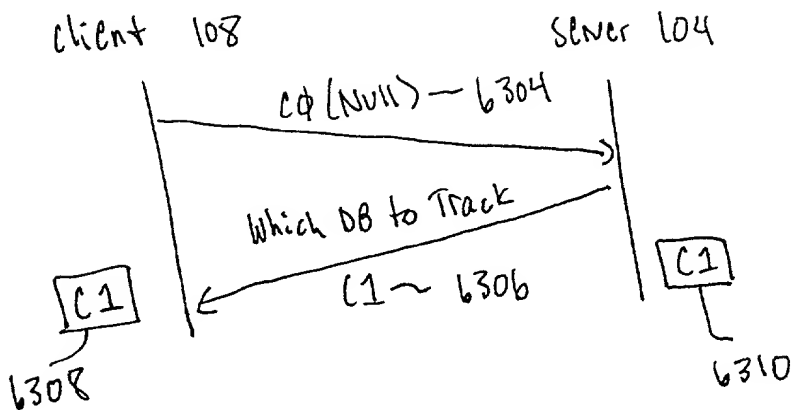


FIG. 63A

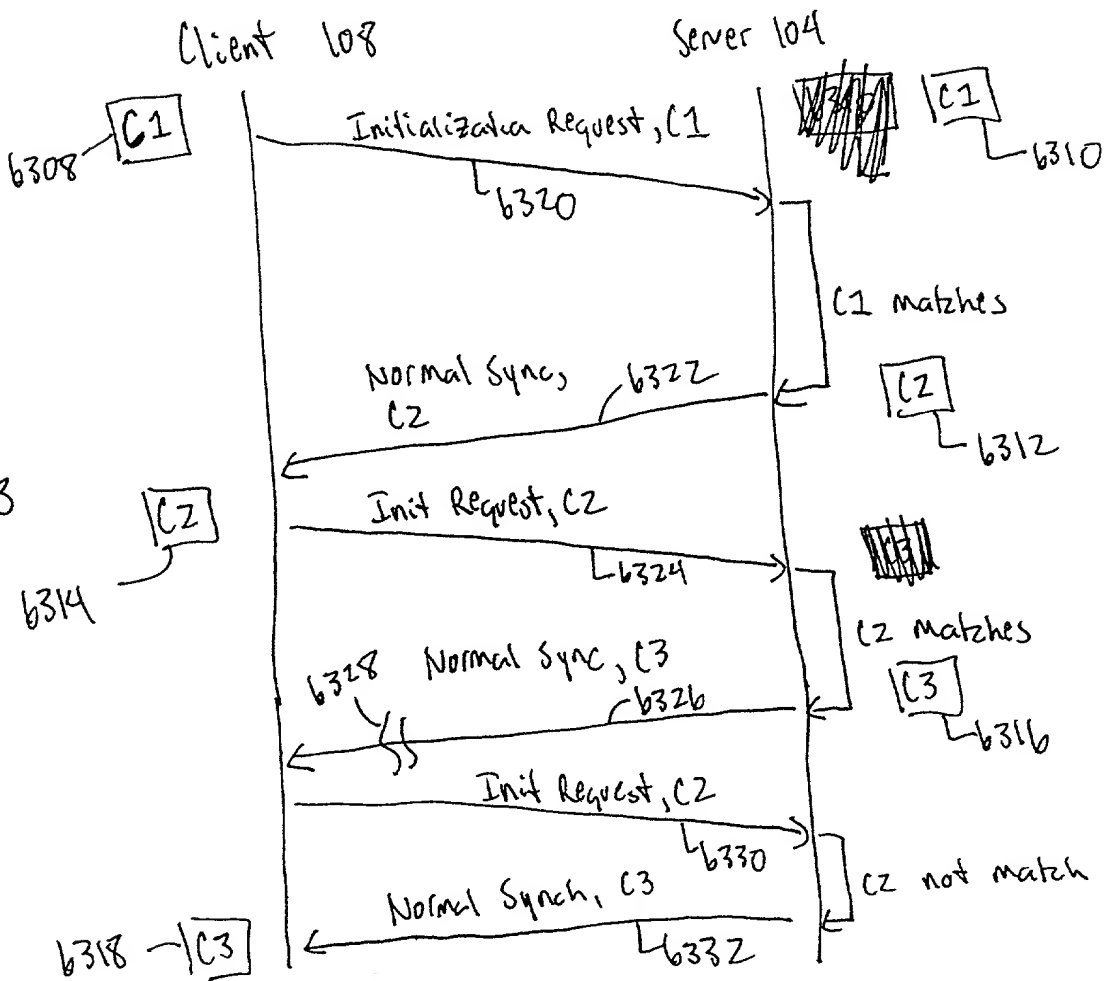


FIG. 63B

FIG. 63B